SAFETY NEWS

MISSILES

Selecting the right glove for the right job is quick and positive once the MSA man is familiar with your particular application.

New M-S-A Molded Handwear—made to our quality standards—now brings complete line selection

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High quality molded handwear—for every industry—is the latest addition to the MSA line of protective gloves.

Built to exacting MSA standards—for durability, comfort and high resistance to oils, gases and chemicals—M-S-A Molded Handwear wears extremely well. High quality materials assure dependable job performance and increase the safety factor. Materials include Rubber, Latex, Neoprene, Buna-N and Plastic in lengths, weights, sizes and finishes to meet the needs of your particular application.

And to help you determine which glove—for which job—MSA has a comprehensive *glove selection guide*. This guide will tell you at a glance how the different glove materials hold up under just about any chemical you care to name. This most useful guide is yours for the asking.

The MSA man can supply you with further information, firsthand. Get in touch with him soon, or write us for new bulletin.

MINE SAFETY APPLIANCES COMPANY
201 North Braddock Avenue
Pittsburgh 8, Pennsylvania

MSA
SAFETY EQUIPMENT HEADQUARTERS

Reg. U. S. Pat. Off.

National Safety Council

Chartered by the Congress of the United States

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Vol. 77, No. 1 JANUARY 1958

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EDITORIAL

Progress in Perspective

MAN, the anthropologists tell us, has been living on this planet some 50,000 years, though not much is known about the first 40,000. Imaginative pictures show him as a gorilla-like creature who lived in caves and knew how to handle his women.

To picture a period of 50,000 years is just too much for our imaginations. We can understand it better as presented by J. Lewis Powell of the Office of the Assistant Secretary of Defense at a recent meeting of the Drop Forging Association. He condensed the panorama of 500 centuries into a mere 50 years.

On a 1000:1 scale, man's progress would look like this:

Ten years ago: He stopped living in caves.

Five years ago: Picture writing was invented.

Two years ago: Christianity started.

Five months ago: Printing from movable type was invented.

Ten days ago: Electricity was discovered.

Yesterday: Wright Brothers flew the first plane.

Since the meeting started: TV was invented.

Since the speaker stood up: Jets came into being.

Mr. Powell didn't mention Sputnik but it would be a mere matter of seconds.

Organized safety work came into the picture somewhere between the Wright boys and TV.

Up to the industrial revolution, progress had been gradual. Then steam power brought enormous industrial expansion and the iron horse broke the hay barrier which had limited travel. Telegraph and telephone gave wings to words.

Progress that used to take years is now accomplished in weeks, thanks to mobilized brainpower applied to specific problems. An invention may even become obsolete before it gets into production.

Just a few centuries ago a million Indians in this country had all the natural resources. Their streams were unpolluted and their top soil and forests were intact. Yet they starved.

We've polluted streams, washed away the topsoil and slashed the forests. Yet even with 170,000,000 people, surpluses are a political and economic problem.

What have we got that the Indians didn't have?

These three, says Mr. Powell.

Technology which gives us the tools to multiply the power of man's muscles and eyes for precise measurements. But will it save us from the consequences of past follies?

Democracy which creates the climate for progress—even though right now we're losing sleep over technical progress behind the iron curtain.

Free enterprise that makes technology and democracy click—that provides the incentive and the pay off.

Certainly, it's an exciting world—one that puts terrific strains on mind and body at times. But who would go back to thawing out the pump on subzero mornings?

And safety is going to be hard pressed to keep up with the parade.

NATIONAL SAFETY COUNCIL OFFICERS, 1957-58

Reg. U.S. *Pat Off.*

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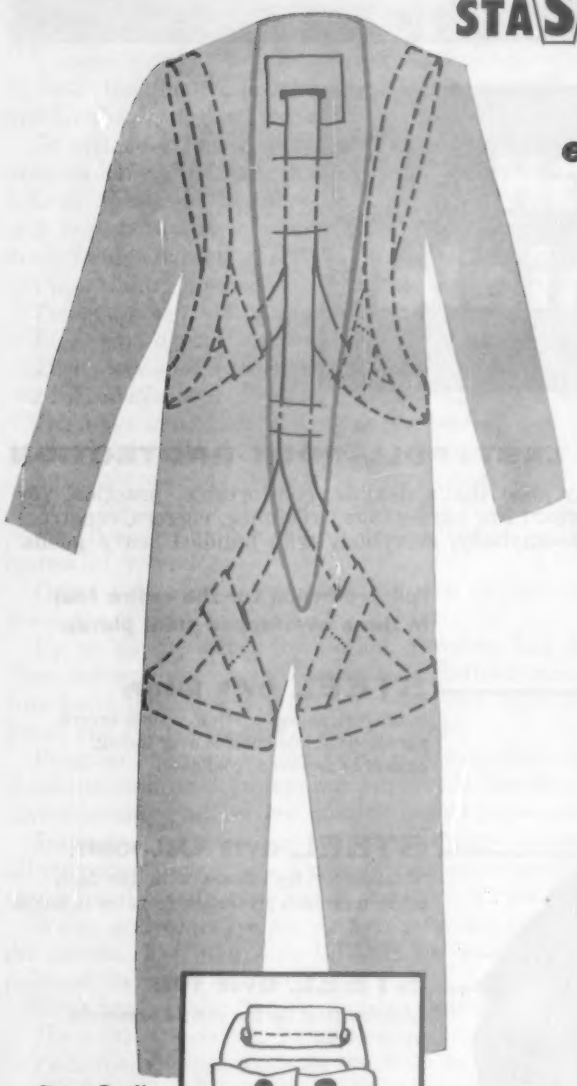
2 MORE SAFETY

STASAFE HARNESS COVERALL



Patent Pending

This D-ring is secured to the harness belting directly between the shoulders on the outside of the coverall. Just before entering the tank, a lifeline is snapped on. Two patented Snap-Straps hold the D-ring flat against the suit. In emergency, rescuers pull on the lifeline . . . Snap-Straps instantly open . . . and all lifting is transmitted to the belting.

everyday work coverall with BUILT-IN *harness!*

Here's the first economical, everyday safety coverall specially designed for men working in tanks, manholes or similar situations.*

A system of 2" Saran web belting, *built directly into the suit*, means a worker carries his safety harness with him at all times. There's never a chance of forgetting this basic safety precaution.

In emergency, the harness operates independently of the suit, putting *no strain on the garment* itself. The four web straps tighten automatically around each thigh and shoulder . . . lifting the wearer in a *vertical position*. This well distributed, even lifting action gently handles even seriously injured men. In fact, stronger pulling merely gives a more secure gripping.

The StaSafe Harness Coverall is perfect for those quick jobs that only require "a few minutes". Here the danger is greatest because of the temptation to avoid the nuisance of going after safety equipment. However, with a Harness Coverall there's *no extra equipment* to bother with. A man has to don a coverall anyhow, why not play it safe and have one handy with *safety built right in?* It may save two lives . . . the injured man's and his rescuer's!

The next time your StaSafe representative calls, ask him about the SD-3909 Harness Coverall. Or write today for more information on comfortable, Sanforized, blue denim coverall with the built-in safety harness.

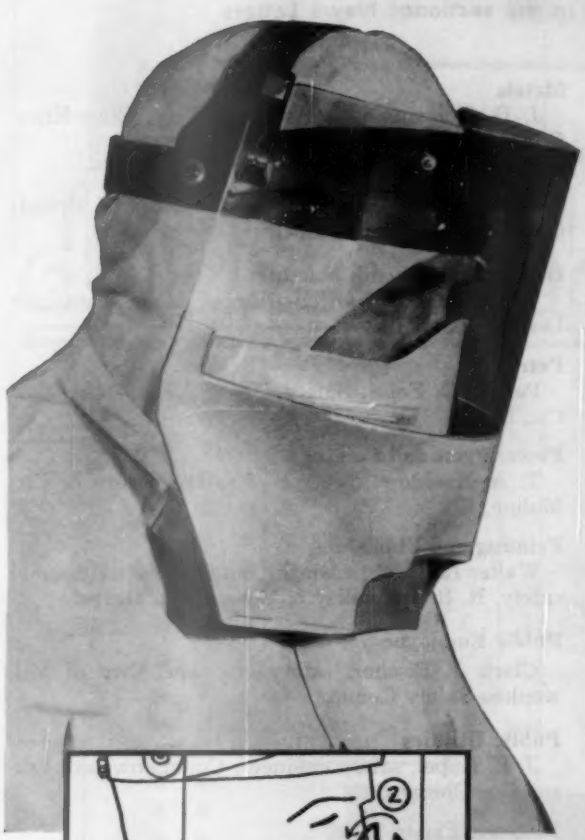
**StaSafe Harness Coverall is designed for emergency lifting. It is not designed to protect against falls.*

STASAFE

FIRSTS FROM STASAFE

STASAFE NO. 40 COLD WEATHER FACE SHIELD

unrivalled safety and comfort in icy winter winds



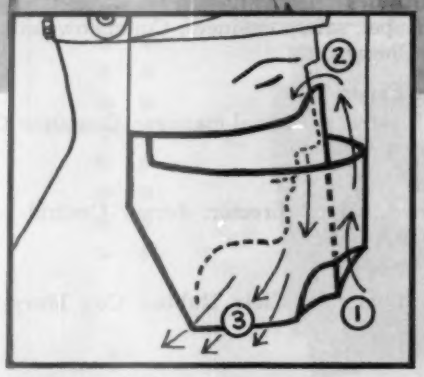
In 1938 StaSafe perfected the first transparent face shield. Now, from StaSafe comes another face shield innovation destined to capture the imagination of industrial safety men. It is the StaSafe No. 40 Cold Weather Face Shield!

Developed by Kenneth L. Treiber, the Cold Weather Face Shield enables men, *for the first time*, to work for long periods in remarkable comfort during the cold, windy days of winter. In tests at –25° with a 25 mile an hour wind blowing, a man worked for 30 minutes, and *never had the window fog, never gasped for breath in the icy blasts, never had the wind sting his eyes or face!*

The Cold Weather Face Shield is mounted on an oversized headgear for use over a parka or stocking cap. For easy adjustment the ratchet headgear can be instantly set to any one of 32 fractional head sizes.

The sturdy, easily replaceable acetate window unit offers premium protection for face and eyes against icy winds and day to day work hazards.

Order a StaSafe Cold Weather Face Shield and see for yourself how it keeps workers comfortable and on the job even during winter's iciest blasts.



HOW THE STASAFE NO. 40 COLD WEATHER FACE SHIELD WORKS—Cold air enters through the bottom opening (1) and rises inside the window, thus keeping temperatures on both sides of the window equal and preventing fogging. When wearer breathes, he draws air over the top of the nose cover (2). The nose cover then directs exhaled breath downward (3) and away from the window.

Pat. No. 2,758,307

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GENERAL CHAIRMEN NSC SECTIONS—1957-58

The following were elected general chairmen of their sections at the 45th National Safety Congress. Complete lists of executive committees will be found in the sectional News Letters

Aeronautical Industries
J. S. T. Swanson, safety engineer, Orenda Engines, Ltd., Toronto, Ont.

Air Transport
W. E. Bertram, safety superintendent, Northwest Airlines, Inc., St. Paul, Minn.

Automotive and Machine Shop
W. C. Barber, senior safety engineer, Standard Accident Insurance Co., Detroit, Mich.

Cement, Quarry and Mineral Aggregates
Seymour Fleming, New York Trap Rock Corp., West Nyack, N. Y.

Chemical
Carroll A. Hebert, Ethyl Corp., Baton Rouge, La.

Coal Mining
George Sambrook, U.S. Steel Corp., Coal Div., Pittsburgh, Pa.

Construction
William G. Hawkins, insurance manager and director of safety, Winston Bros. Co., Minneapolis, Minn.

Electrical Equipment
Earl Gebhart, supervisor of safety, Frigidaire Div., General Motors Corp., Dayton, Ohio.

Fertilizer
George F. Dietz, safety director, Fertilizer Manufacturing Coop., Inc., Baltimore, Md.

Food
Stanley W. Parsons, general safety director, Carnation Co., Los Angeles.

Glass and Ceramics
Russell Frank, safety director, Ferro Corp., Cleveland, Ohio.

Marine
L. H. Quackenbush, vice-president, States Marine Lines, New York.

Meat Packing
Charles Elsby, Employers Mutuals of Wausau, Milwaukee.

Metals
J. D. Holtzapple, director of safety, Blaw-Knox Co., Pittsburgh, Pa.

Mining
Ivan H. Sloane, Mines Association of British Columbia, Vancouver, B. C.

Occupational Health Nursing
Verna Paskuna, Owens-Illinois, Glass Container Div., Streator, Ill.

Petroleum
Parker C. Folse, Safety Dept., Socony-Mobil Oil Co., N. Y.

Power Press and Forging
T. A. Kraklow, director of safety, Deere & Co., Moline, Ill.

Printing and Publishing
Walter R. Smith, manager, employee activities and safety, R. R. Donnelley & Sons, Co., Chicago.

Public Employee
Clark J. Fischer, safety engineer, City of Milwaukee Safety Comm.

Public Utilities
J. E. Appel, safety engineer, Commonwealth Edison Co., Chicago.

Pulp and Paper
E. F. Ripstra, personnel manager, Container Corp. of America, Chicago.

Railroad
J. Lloyd, safety director, Jersey Central Lines, Jersey City, N. J.

Rubber
C. E. Beck, St. Clair Rubber Co., Marysville, Mich.

Textile
J. A. Winkler, district engineering manager, American Mutual Liability Co., Atlanta, Ga.

Trades and Services
Roger J. Bear, safety director, The Kroger Co., Cincinnati, Ohio.

Wood Products
R. C. Childress, Cooperage Div., National Distillers Products Corp., Memphis, Tenn.

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THE SAFETY VALVE

Nothing human is alien to me

—TERENCE

So You Want to Write?

THOSE OF US who scribble for a living sometimes forget how much a by-line means to many a layman. Some people spend four years at a journalism school learning to write for publication. Others play it by ear. I've seen good stuff by writers of both kinds.

Some publications prepare elaborate instructions for would-be authors. Here is one that has been in my morgue (idea file) for years. The recommendations are thoroughly sound, though not very realistic. *The italics are merely personal comments.*

1. Have something to say. *If you have something the world is waiting to hear, you can split infinitives and type your copy single space. Or even write it longhand.*

2. Let your ideas take form in your mind before you begin to write. If you can't hold the ideas in your mind, how can the reader? *You never realize how little you know about a subject until you try to put it on paper.*

3. Don't write when tired; tired writing makes tired reading. *But when would you ever get it done?*

4. Choose a time and place free from interruption. *When and where in this busy world, please?*

5. Write down the words just as they come, without too much attention to detail. *Getting something on paper is a good start.*

6. Rewrite the article carefully with your readers in mind. *If you haven't time, send it in anyway.*

7. Check through to eliminate big words and fancy phrases. *By all means throw out those ostentatious polysyllabics.*

8. Check through again to make sure the sequence of ideas is right. *No argument there.*

9. Check through once more to see if you can add something personal, human or concrete. *These are things that win reader interest.*

10. Boil it down. A 1000-word article will be read by four times as many people as 2000 words. *And it is 10 times as likely to land in print. But brevity isn't worth while if you have to leave out essential information or human interest.*

11. Hold the article for a few days *(if the deadline isn't kicking you in the pants)* and you can review it with more detachment. *My own stuff begins to look pretty mouldy by that time.*

12. Try it out on friends who will be honestly critical. *Isn't that putting quite a strain on friendship?*

Of course, editors would be very happy if every manuscript were a literary gem typed double space. But if this magazine had insisted on those qualities some of the best articles would never have been published. Any good editorial cub can polish up a manuscript but it takes somebody with know-how to put in on paper first.

Adventures in Eating

DUNCAN HINES is one of humanity's great benefactors. His research on eating away from home has undoubtedly cut down the consumption of bicarbonate. His guide books on places to eat and sleep are as important as the road maps to many tourists.

Yet there are long stretches of highway where you'll drive mile after mile without seeing any place bearing the endorsement of Duncan Hines or AAA. Or you may see an inviting place on the other side of a four-lane divided highway and you're in the wrong lane to make a turn. So you keep on going and finally eat at some ptomaine tavern and top it off with Tums.

On a recent trip through North Carolina, Tennessee, Arkansas, Missouri and Illinois nothing would have been more welcome than a Howard Johnson restaurant or an S & W Cafeteria.

Mr. Hines is one guy I don't envy. On one of his recent trips he covered 8000 miles in seven weeks sleeping in 34 beds and eating in 90 restaurants. He can pick them better than most tourists.

After spending 10 successive nights in homes away from home, I felt I never wanted to see another motel. All the places were clean and reasonably comfortable but even the best of them are dreary and impersonal. And I'd had enough of roadside beaneries. Maybe we'd have found good ones if we'd left Highway 66.

"Duncan, who is our senior in years," says William Feather, "thrives on jaunts that would kill us—and maybe you."

The Killing Pace

Go on, my dear Americans. Whip your horses to the utmost—excitement, money, politics! Open all your valves and let her go—swing, whirl with the rest. You will soon get under such momentum you can't stop if you would.—WALT WHITMAN.

And Walt had never seen an automobile—and probably never heard of psychiatry.

Carman Fish

ACCO Registered® Wire Rope Slings

Photo by Cities Service Company

How "Hot" Cobalt is Handled Safely

• Here, encased in a 3-ton lead jacket, is radioactive Cobalt 60 being raised from its deep water storage pool. The tools used to handle this difficult job safely are a Geiger counter and an ACCO *Registered* Wire Rope Sling.

Your own lifting operations may not require a Geiger counter but they do deserve the guaranteed safety that only ACCO *Registered* Wire Rope Slings can offer. How can you be sure that an ACCO sling is guaranteed safe? By the registration certificate and tag that it carries upon leaving the factory. These registered symbols of safety are your assurance that each ACCO sling has passed a rigid strength test at twice its rated load-carrying capacity.

Only ACCO *Registered* slings give you the confidence of DUALOC endings...the double-locked mechanical ending which retains full wire rope strength with either thimble or plain loop.

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4. Actual field service test of each design
5. Metal identification tag on each sling
6. Signed Registry Certificate with each sling

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• Pictured above is a huge, 35,000-pound casting being lifted *easily and safely* by a 4-leg ACCO *Registered* Sling Chain. Directly beneath the load is a highly polished and machined crank shaft worth many thousands of dollars.

Imagine the cost in lost labor and materials, should the sling chain fail! But it won't fail—for this ACCO *Registered* Sling Chain and all its components have the inbuilt strength needed to handle the job with complete safety!

When you buy an ACCO *Registered* Sling Chain, you get these four exclusive "plus values" which *add materially to the worth, but not to the cost,* of the sling:

1 • **Accoloy X-weld 125 Chain,** for extra strength. This chain hangs straight . . . does not kink . . . has extra resistance to bending.

2 • **New Shaped Master Link,** uniquely shaped to withstand deformation under loads up to 18% greater than a round-section link can do.

3 • **ACCO Registration Ring,** serially numbered as evidence that the assembled sling has been factory proof-tested to twice its working load limit.

4 • **Registration Certificate,** signed by us, attesting to the field-tested design and proof-testing of the complete sling.

Remember, the best sling is one of your most economical material-handling tools. You'll find it good business to consult your ACCO *Registered* Sling Chain Distributor on all your sling needs; his counsel is available without obligation. If you don't know his name, write us at York, Pa.

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4 Actual field service test of each design
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AROUND THE COMPASS

ACTIVITIES • PROGRAMS • EVENTS

By Nils Lofgren

Field Service Department, NSC

Organize School Council

Student representatives of 26 public and parochial high schools in and around Portland, Ore., met recently to organize the Greater Portland High School Safety Council.

The meeting was arranged by the Portland Traffic Safety Commission in cooperation with school administrators.

The council will stimulate safety programs in the individual high schools and sponsor city-wide events and activities to promote accident prevention.

Formation of such a coordinating body was one of the recommendations of students who attended the two Teen-age Traffic Safety Conferences which have been held in the city.

Washington Women Meet

More than 100 persons attended the First Annual Women's Safety Seminar for the state of Washington on November 14th.

The opening address at the general assembly was made by Warren A. Bishop, assistant to Governor Albert D. Rosellini. Separate sessions were held on home, traffic and school child safety.

General chairman was Mrs. Lois Liebach, home safety consultant for the Washington State Department of Health. Marvin H. Powell, managing director of the Washington State Safety Council, was coordinator.

Wisconsin Council Plans Traffic Program

The Wisconsin Council of Safety made its first program move in its traffic program November 6 when 35 representatives of local safety councils met to discuss local organization and local programs.

Clyde Schlueter, of Employers Mutuals of Wausau and WCS vice-president for traffic, was chairman.

Local needs were stressed at the meeting, with the recommendation that the groups base their programs on supporting the analysis recommendations of the Annual Inventory of Traffic Safety Activities.

Connecticut Commission Announces Staff Changes

Three staff changes have been announced by the Connecticut Safety Commission.

Charles W. Bishop has been named assistant director; Sophie A. Frankel was promoted from administrative assistant to executive assistant and E. Russell Tryon, field representative, was designated supervisor of traffic inventory programs.

A resident of New Haven and a Yale University graduate, Mr. Bishop was an editor of *Motor Magazine* from 1949 to 1951. Until 1953 he was associated with the Schaffner Advertising Agency, New Haven. Since that time he has been self-employed. In his new post, he will serve as assistant to James K. Williams, executive director.

Mr. Tryon will continue field assignments, but will have major responsibility for assisting communities to use effectively national traffic inventory programs. All 69 of the state's cities and towns over 5,000 population participate in the Annual Inventory of Traffic Safety Activities. All eligible communities also participate in the Annual Pedestrian Protection Program.

New Yorkers Get Leaflets

A joint enterprise by the New York State Bureau of Motor Vehicles and the Greater New York Safety Council to promote safer driving got under way the first week in November.

All motorists renewing their operator licenses or automobile registrations will receive safety reminders in the form of illustrated leaflets. The Council has provided an initial supply of 50,000 to the Motor Vehicle Bureau.

State Motor Vehicle Commissioner Joseph P. Kelly has instructed the staffs of all motor vehicle bureau offices in New York City to put one of the safety leaflets in the hand of every person to whom a license or registration is issued, including new drivers.

Seven different leaflets will eventually be supplied to the Bureau of Motor Vehicles for similar distribution.

The first leaflet, *Long Live Good Drivers!* stressed road courtesy, patience and forbearance as preventives of accidents. Subsequent leaflets will deal with mechanical equipment, speed, visibility, the physical and mental condition of the motorist, passing, and pedestrians.

Farm Safety Awards Presented to Media

Two radio networks, six television stations, 22 radio stations and 11 magazines have been granted the National Safety Council's Public Interest Award for exceptional service to farm safety.

The awards are not competitive. They were conferred for outstanding activities in connection with the 14th annual National Farm Safety Week in July, 1957, or for exceptional service to farm safety during the preceding 12-month period.

The board of judges consisted

—To page 116

COMPARE ITS BIG SIZE

Magic Lens Tissue
SILICONE TREATED

The white space on this page is exactly the size of the Magic sheet; over 50% larger and our paper costs you less. It has twice the tearing strength. Loaded with sparkle-power, it polishes—and protects—as it cleans crystal-clear.

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Magic Heavy-Duty Paper, not silicone treated, is our superb wet-strength tissue. No scratching on plastic, and no lint. Again, you save money.

Ask to exchange Magic for your old cleaning stations FREE, or order anew—now! Wire or write us or your Safety Jobber today!

Compare the Quality, the Size and the Price and Buy.

Magic Lens Tissue, 6 refills	per carton, $8.40
Magic Lens Tissue Dispenser	each, $2.50
Magic Heavy-Duty Paper Dispenser	each, $5.95
Cleaning & Anti-Fogging Fluid, Twelve 12 oz. cans	per carton, $12.50
Magic Heavy-Duty Paper, 18 giant refills (760 sheets ea.),	per carton, $11.60

All prices F.O.B. shipping point

Exchange all your other Stations for Magic FREE

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America's leading Eye-aid for Safety.

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The Silicone Paper Company of America Inc. 75 E. 45th St., New York 17, N. Y.

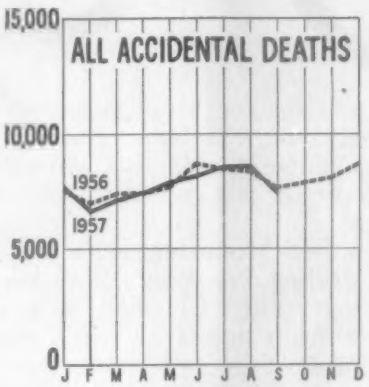
Circle Item No. 6—Reader Service Card

THE ACCIDENT BAROMETER

Prepared by the Statistics Division, National Safety Council

THE DEATH TOTAL for September was approximately 7,400, a reduction of 4 per cent from September, 1956. Decreases occurred in motor-vehicle and home accident fatalities, an increase in work and no change in public non-motor-vehicle.

The 9-month death total was 69,600, or 1 per cent below 70,300 in 1956. Fewer deaths resulted from motor-vehicle and home accidents and more deaths from work and public non-motor-vehicle accidents.



	1957	1956	Change
September	7,400	7,700	—4%
Nine Months	69,600	70,300	—1%

Motor-Vehicle Deaths

The motor-vehicle death total for September was 3,380, a decrease of 9 per cent from 1956. Compared to 1955, it was a reduction of only 2 per cent.

Deaths for 9 months totalled approximately 28,110, or 3 per cent below 28,910 in 1956. The 9-month death rate per 100,000,000 vehicle miles is not available at this time but the 8-month rate was 5.6, a reduction of 7 per cent from 6.0 in 1956.

Of the 47 states reporting for 9 months, 28 had fewer deaths than in 1956, 3 had the same number and 16 had more deaths. Reporting cities with populations of more than 10,000 had a decrease of 16 per cent for September and 4 per cent for the 9-month period.

Regional changes from 1956 in the 9-month motor-vehicle death totals were:

North Atlantic	—2%
South Atlantic	—3%
North Central	—5%
South Central	—4%
Mountain	—6%
Pacific	—1%

Work Accidents

Deaths from work accidents numbered 1,200, or 100 more than in September, 1956. The total for 9 months was 11,000, an increase of 2 per cent over 1956.

The September frequency rate per million man-hours for plants in community council contests was 4.74, a reduction of 13 per cent from 1956. The September rate for plants in 18 National Safety Council sectional contests was 5.06, a decrease of 10 per cent from 1956. The 9-month rate in community council contests was 5.41, down 5 per cent; in sectional contests, the rate was 5.36, also down 5 per cent.

Home Deaths

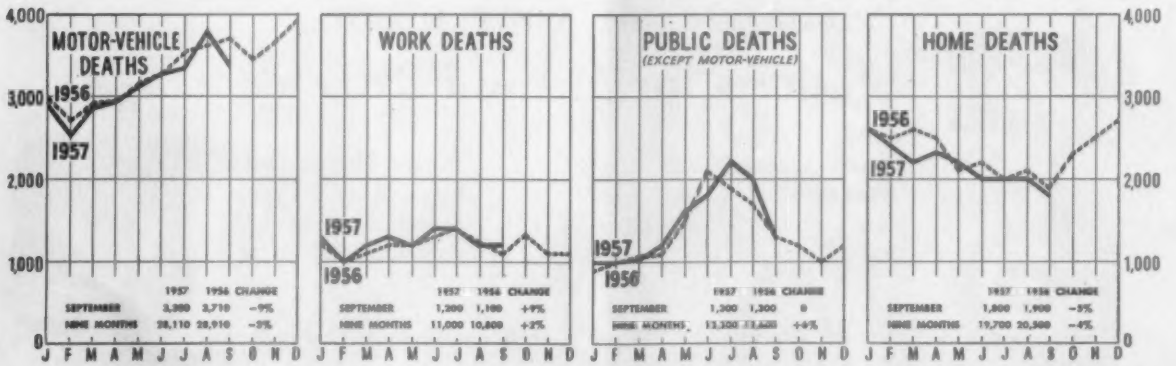
The total for home deaths in September was 1,800, or 100 fewer than occurred in 1956.

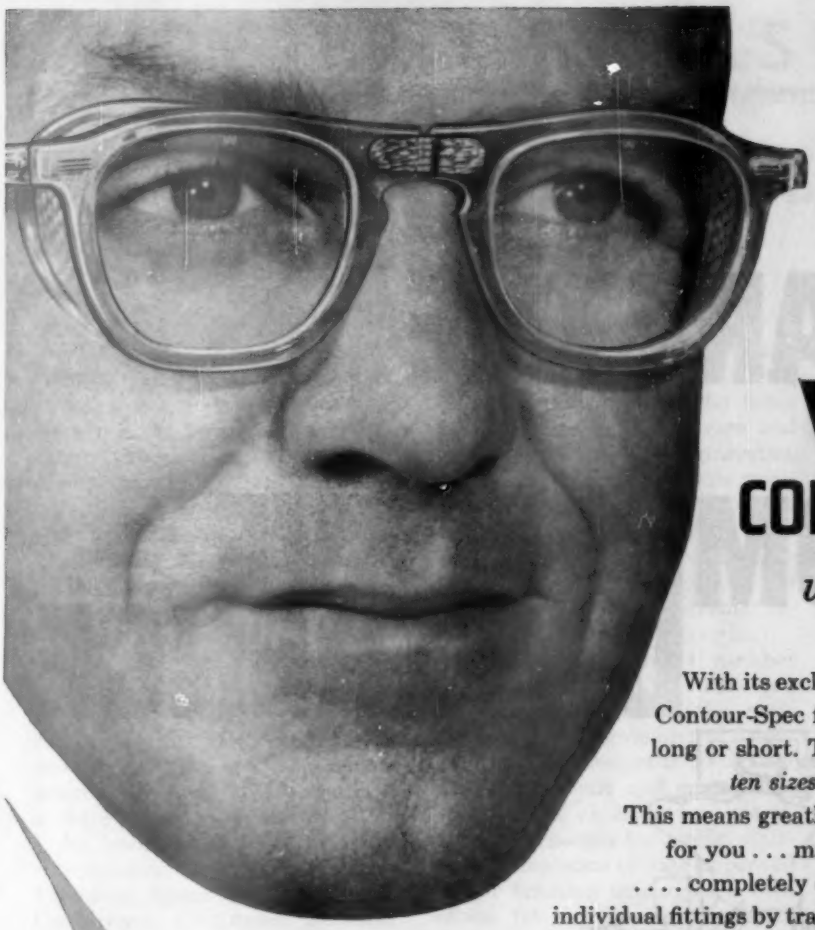
Deaths during the 9 months numbered about 19,700, a reduction of 4 per cent from 1956. There were decreases in deaths from poisonings, burns and falls, and increases in deaths from mechanical suffocation and firearms accidents. Most of the decrease occurred among persons 25 to 44 years old, but deaths of children under 5 years of age and persons 45 years and over also were fewer.

Public Deaths

Deaths in September from public non-motor-vehicle accidents numbered about 1,300, no change from 1956.

The 9-month death total was 13,300, an increase of 6 per cent over 1956. Most of the increase occurred in fatal burns and falls, but deaths from drowning and firearms accidents also were more numerous. Aside from a decrease in deaths of young people 15 to 24 years old, all age groups showed increases over 1956 with the largest change recorded for persons 65 years and older.





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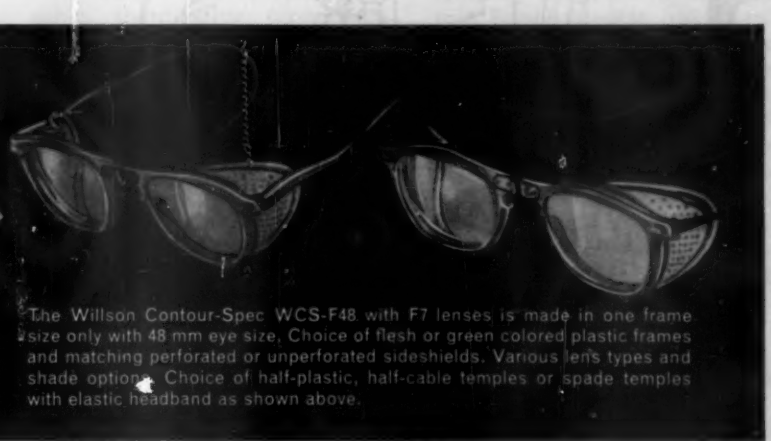
with F7 lenses

With its exclusive Hinged Bridge the Willson Contour-Spec fits *all* faces... broad or narrow, long or short. Thus, *one size only replaces up to ten sizes of conventional safety spectacles!* This means greatly simplified inventory-handling for you . . . makes ordering and stocking easy .... completely eliminates size specification and individual fittings by trained personnel. You *always* have proper-fitting spectacles on hand for *new* as well as present employees! And the new F7 shape Contour-Spec provides wider area of vision... broader protection... and the smarter appearance that wins immediate approval of workers! Standardize on the Contour-Spec with F7 lenses and you'll bring *new efficiencies, new economies* to your program.

the one-size safety spectacle that fits everybody



The Willson Contour-Spec WCS-F48 with F7 lenses is made in one frame size only with 48 mm eye size. Choice of flesh or green colored plastic frames and matching perforated or unperforated sideshields. Various lens types and shade options. Choice of half-plastic, half-cable temples or spade temples with elastic headband as shown above.

Call your nearby Willson distributor for a demonstration of the new Willson Contour-Spec with F7 lenses, or write direct for descriptive data and prices.

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Circle Item No. 7—Reader Service Card

IN MAKING FIRE EXTINGUISHING EQUIPMENT...OR REFRIGERATION PRODUCTS...OR CHEMICALS...OR WIDGETS

PEOPLE ARE THE REAL COMPETITIVE DIFFERENCE

ANSUL CHEMICAL COMPANY / MARINETTE, WISCONSIN

FIRE EXTINGUISHING EQUIPMENT / INDUSTRIAL CHEMICALS / REFRIGERATION PRODUCTS / NATIONAL DISTRIBUTORS OF "FREON" REFRIGERANTS

Circle Item No. 9—Reader Service Card

WIRE FROM WASHINGTON

By Harry N. Rosenfield
Washington Counsel, National Safety Council

SAFETY, like many other concerns of the Federal government, looks ahead to a Congressional session in which the major orientation promises to be in other directions.

Public Officials Traffic Safety Conference. Under the auspices of the President's Committee for Traffic Safety, a two-day Public Officials Traffic Safety Conference was held in Washington. The object of this first national conference limited to public officials responsible for traffic safety was to reappraise the nation's accident prevention efforts and to establish a list of priority measures.

An underlying thread through the keynote speeches by Vice-President Nixon and Governors' Conference Chairman Stratton was acceptance of the President's challenge to the governors last summer that federal intervention, by default, could be avoided only by effective state and local action in preventing and reducing traffic accidents.

Governor Ribicoff, chairman of the Highway Safety Committee of the Governors' Conference, said that "a national emergency exists in the field of traffic safety." He set the goal: traffic accidents could be halved, with a resultant saving of 20,000 lives annually, if every state would fully implement a balanced, integrated, continuing traffic safety program.

Sound and aggressive leadership by public officials is the key ingredient in the solution of the traffic accident problem, according to Harlow H. Curtice, chairman of the President's Committee. "The best device" for achieving public support for official programs, he said, "is a citizens' traffic safety organization in every state and community."

A wide range of immediate and long-range priorities was drafted in eight workshops in the fields of enforcement (both police and courts), education, engineering, laws and ordinances, motor vehicle administration, and official coordination (both local and state). Guideposts were also approved in the special fields of public information programs, research, and accident records.

Among the substantial number of priority items for improving the traffic accident situation were the following: tightening of driver licensing requirements; establishment of realistic and enforceable speed limits on highways; standardized penalties for traffic violations; completion of state-approved driver training course as a condition for driver's license; state minimum standards for school bus equipment; stress on good driving as a "moral issue;" stepped-up improvement of highways, including control of access; expanded research into causes of accidents; establishment of traffic safety coordinating committees, composed of officials, at state, county and municipal levels of government; development of public information programs to enlist increased public support for traffic safety programs.

The President's Committee is scheduling four regional conferences, to develop public support for the recommendations of the Public Officials Traffic Safety Conference. Dates and places are:

March 11-12, Atlantic City.
April 1-2, Chicago.
April 8-9, San Francisco.
May 29-30, Miami Beach.

Industrial Safety. The injury rate for workers in the wholesale and retail trade in 1956 was fractionally higher than that for manufacturing workers, according to the figures just released by the U.S. Department of Labor. For trade employees, the average rate was 12.5 disabling injuries per million man-hours worked in 1956; the all-manufacturing rate was 12.0. The figures indicate a relatively stable rate in the trade injuries (12.5 in 1956 as compared with 12.3 for 1950), but a substantial reduction of 23 per cent between 1950 and 1956 in the manufacturing experience.

A group of eight experts, including two from the United States, met under the sponsorship of the International Labor Organization to consider the protection of industrial employees against radiation from x-rays or radioactive substances. Their principal task was to establish practical international standards which will contribute to the solution of safety problems posed by the use of radiations, especially in non-atomic plants. They were called on to revise the ILO's Model Code of Safety Regulations for Industrial Establishments, insofar as it deals with ionizing radiations, and to review ILO's work in the field of protecting employees against radiation and to make recommendations for future activities.

The Atomic Energy Commission scheduled a series of four industry advisory conferences to discuss proposed AEC regulations effectuating recently enacted legislation which provides indemnification for claims arising out of nuclear accidents. (See "Wire," October 1957) The AEC also announced progress with its safety program in connection with the study of fast reactors; its preliminary conclusion is that such fast reactors will be no less safe than other kinds of reactors.

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EXCLUSIVE REPORT

A NATIONAL SAFETY COUNCIL MEMBER SURVEY

WHAT ACCIDENTS COST THE AIRCRAFT INDUSTRY

Results of Aeronautical Industries Section Inventory of 23 plants employing more than 200,000 workers

What do accidents cost?

That's a question that will always get a hearing among management and safety men. Certainly, the great strides made in industrial safety in the past 50 years have been due in no small part to the incentive provided by the high cost of accidents.

To get more specific facts and figures on accident costs—direct and indirect—the National Safety Council's Industrial Conference has included questions on costs in its Inventory of Occupational Accident Prevention Activities.

Several of the Council's industrial sections have completed this portion of the inventory, among them the Aeronautical Industries Section.

WITH THE EYES of the nation turned skyward on the sputniks and an all-out effort underway to achieve missile superiority at any cost, the cost of accidents in aircraft manufacturing and missile making is a timely subject of no small concern to the success of the program. And, since the accident problems in the industry do not differ basically from those in the broader metalworking field, this survey has wide application.

The Council survey of aircraft manufacturing includes reports from 23 plants in as many locations in the United States and Canada. More than a fifth of a million workers are employed in the plants surveyed. The annual cost of medical and compensation payments for the accidents they incurred runs well over a million dollars.

The plants are involved in a wide range of activities in aircraft construction—engine and aircraft production, missile production, aviation electronics, jet and rocket production, helicopters, aircraft components, and aeronautical research.

Cost of Accidents

Although not all the plants surveyed were able to provide figures on accident costs, those that did indicated that costs vary widely from operation to operation. Considering only the so-called direct cost of accidents (compensation and medical cost), the average annual cost of accidents per employee varied from $2.47 to $11.47 among the large plants. The median cost was $6.86.

Seven of the larger plants provided information from which the average compensation and medical care cost for a disabling injury was computed. The amounts ranged from a low of $414.58 to a high of $1,313.66. The median amount for all plants responding was $983.42. In most plants the compensation payments were greater than the medical payments. Taking the average for all plants, $1.38 was paid out in compensation payments for every $1.00 in medical payments.

Indirect Accident Costs

For some years many safety men have accepted an indirect cost of accidents ratio of four times the direct cost. But there has been a doubt in the minds of many as to the validity of this 4 to 1 ratio. The inventory of the aircraft industry tried to get figures on indirect costs but found that there were few plants that keep comprehensive data on the subject.

However, one plant of approximately 1,800 employees has provided an estimate of its total uninsured accident costs for one year, which gives a ratio of 5.15 to 1 as the ratio of uninsured to insured costs. These figures are based only on easily measurable costs, and presumably if a more detailed study were made, the ratio would

WORKING ON VERTICAL FIN of C-130 aircraft at Lockheed's Georgia Division in Marietta, Georgia.

ACCIDENT RATES AND OTHER DATA ON LARGER PLANTS

Number of Employees	Ratio of Compensation to Medical Payments	Frequency Rate	Severity Rate	Accident Cost per employee	First Aid Cases per employee
39,000	3.33	7.9	803	$1,313.66	6.3
27,000	2.75	6.2	646	1,047.00	5.5
23,700	1.68	5.8	337	1,024.00	4.1
23,600	1.40	4.3	271		3.7
20,400		2.6	228		2.3
18,000		2.5	185	(983.42—median)	2.2
14,300		2.4	151	764.00	1.9
5,300	(1.38—median)			679.00	
	1.35	(2.25—median)	(74—median)	414.58	(1.85—median)
(4,950—median)	1.21				
4,600	0.64	2.1	72		1.8
4,600	0.43	1.5	63		1.7
4,300		1.4	50		1.5
4,300		1.1	38		1.4
3,500		1.1	29		0.3
2,900		0.9	2		0.24
1,800		0.85	2		0.08
1,800		0.4			

be somewhat higher. For instance, losses due to inefficient work or reduced output following an accident were not included. Of course, these somewhat intangible effects of an accident are difficult if not impossible to measure, but they, nevertheless, are there.

Three Case Histories

This same plant submitted as examples three specific cases, which show how much the indirect costs can vary from accident to accident. (See chart.) Two of these cases showed a ratio of 2.3 to 1. The third ratio was an astronomical 101 to 1.

The first case was a nondisabling back strain and the second a fractured toe which resulted in 12 days of disability. Neither of these involved any damage to equipment—usually the principal culprit in running up the cost of accidents.

The third case, a nondisabling arm bruise, resulted in materials damage, some labor repair costs and 20 hours of test delay. The ratio for this accident was 101 to 1 without computing any cost for test delay.

Trips to the Medics

The average worker in the aircraft industry, judging from the survey, reports for medical or first-aid treatment once or twice a year. One plant reported that employees averaged six visits a year, while at the other extreme, another indicated that employees get to first aid but once in 12 years.

One explanation of this broad differential is the varied operations involved. They range from pure research to heavy manufacturing. Then too, many of these plants do not distinguish between industrial and nonindustrial first-aid cases, so in some cases these trips to the dispensary may be for cold tablets or headache pills.

Still Having Accidents

In recent years, the declining industrial frequency rate has led some people to believe that accidents will soon be a thing of the past. However, any safety man who has let up in his efforts knows how easily the rate can edge upward. Moreover, these people who see accidents disappearing forget that for every disabling (lost-time) accident that shows up on the accident charts, there are usually hundreds of slight injuries involving first-aid or some type of medical attention.

Some plants reported that they had between 1,000 and 2,000 first-aid cases for each disabling injury resulting in lost time. Several plants reported fewer than 100. The median number for large plants was 670.5. Variations in the number of first-aid cases may be partially due to the greater encouragement given in some plants to nonindustrial first-aid visits.

Costs as an Incentive

Will a supervisor engage in greater safety efforts if his employees' accident costs are charged against his operating costs?

That's a matter of opinion. Four of the large plants and one of the small ones reporting in the aeronautical industries inventory use accident costs as a supervisory incentive. The majority of the plants reporting do not do so. However, a survey of plants in another of the Council's industrial sections revealed that 52 per cent of the large plants and 33 per cent of the smaller ones *do* provide this safety incentive to their supervisory personnel.

Type of Injury

A majority of the plants classify injuries by categories such as type, agency and parts of body affected. One plant that included an analysis of its injuries showed that fingers were the most frequently injured (35 cases) with eyes in second place (20 cases). Lacerations were the most common type of injury (40 cases), with foreign bodies in the eye next (18 cases).

Grinders, turret lathes and engine lathes led the list of machines involved. The main causes of the accidents were failure to use protective equipment, unnecessary haste, worker inattention, improper use of equipment, and violation of safety rules.

What caused the accident? Did the worker act unsafely? Did management fail to correct an unsafe condition?

There was a time when accident causes were neatly divided into 85 per cent unsafe acts and 15 per cent unsafe conditions. But most recent studies have failed to support any such precise breakdown. And it is definitely known that a substantial percentage of accidents result from a combination of these factors.

The aeronautical industries inventory supports this view.

All of the plants reporting indicated that unsafe acts are the main causes of accidents. An unsafe physical or mechanical condition is the principal cause in only a minority of work injuries.

One plant blamed practically all of its accidents on unsafe acts of workers while another admitted to 40 per cent resulting from unsafe conditions. However, it is of interest that most of the plants providing this information showed that an unsafe condition was the principal cause in more than 10 per cent of the cases.

ANNUAL RATIO OF UNINSURED TO INSURED COSTS

One plant's estimated annual indirect vs direct costs

1. EMPLOYEE TIME—Dispensary Cases

If we conservatively assume $13.65 cost of employee time at dispensary, travel to dispensary, supervisory time, and other employees' time lost due to the injury. This applies to 628 disabling and non-disabling cases.

$ 8,572.00

2. EMPLOYEE TIME—First-Aid Cases

If we conservatively assume three first-aid cases occurred for each dispensary-reported case and estimate 20 minutes productive time lost at $2.14/hr.

1,340.00

3. NON-PRODUCTIVE WAGES

If we add management's contribution to wages paid employee during absence (94 calendar or 84 working days) in nine disabling cases.

656.00

4. PROPERTY DAMAGE

If we conservatively estimate property damage due to occupational accidents.

5,000.00

5. TEST DELAY

If we assume delays of test work represent losses of $3,000 (?) per hour and consider only one such actual delay of 20 hours.

60,000.00

TOTAL UNINSURED COSTS	$75,568.00
TOTAL MEDICAL AND COMPENSATION COSTS FOR PERIOD	$14,645.13
RATIO OF UNINSURED TO INSURED ACCIDENT COSTS	5.15 to 1

INSURED VS UNINSURED COSTS OF ACCIDENTS

Examples of three selected types of accidents

	CASE I Minor arm bruise Non-disabling	CASE II Fractured toe Disab. -12 cal. da.	CASE III Minor back strain Non-disabling
INSURED			
1. Medical expense	$ 11.00	$ 46.00	$ 6.00
2. Compensation paid		16.80	
Total	$ 11.00	$ 62.80	$ 6.00
UNINSURED			
1. Non-productive wages while at home		$129.12	
2. Non-productive wages while at dispensary		7.98	5.00
3. Non-productive wages, travel to dispensary		3.42	1.25
4. Non-productive wages to workers who stopped jobs	$ 14.28	1.71	1.25
5. Wages of witnesses during interview	42.84	1.14	1.25
6. Salary of supervisors investigating, reporting	48.00	2.00	4.90
7. Cost of repairs to damaged equipment			
—Material	990.00		
—Labor	16.66		
8. Test delay	?? ??		
TOTAL	$1111.78+	$145.37	$13.65
RATIO: Uninsured Costs / Insured Costs	101 / 1	2.3 / 1	2.3 / 1

ABSORBENTS can't reduce the level of the source, but they can reduce or prevent reflection of acoustic energy which strikes them, stopping multiple echoes which can build up a noise level higher than that of the source.

ACOUSTICAL TREATMENT—

Answer to Your Noise Problem?

Some noises can't be eliminated, and medical control has limitations. "Sound control" may be the solution

By LYLE F. YERGES

THE BEST IDEA yet developed in noise control is to avoid making noise. It's always the most effective, and usually it's the cheapest.

LYLE F. YERGES is Merchandise Manager, Industrial Sound Control, United States Gypsum Company, Chicago. This article has been adapted from a paper presented at Noise Control Session, 45th National Safety Congress, Chicago, October 24, 1957.

Medical control of hearing losses. It would appear that protecting the individual against noise would be the next best method. However, everyone has had painful experiences trying to get workers to wear gloves, goggles, safety shoes and hats. Imagine the difficulty to get them to wear ear plugs or muffs.

Furthermore, it is very difficult to forecast susceptibility to noise damage or to measure hearing loss accurately when it does occur. Hearing losses can be determined only after the damage is done—and that is too late.

Acoustical treatment. So, I'm going to concentrate on controlling the acoustical environment—commonly known as sound control or acoustical "treatment." To most people, acoustical treatment means

the application of acoustical tile or absorbents to the ceiling of a room. This is the commonest form of noise control, and its use is widespread.

Like the word "treatment," however, it suggests a "cure" or "correction" of an existing ill. Like most cures, it can be expensive and may not be completely satisfactory. For example, at the 100-plus decibel level of many factories, it is very difficult to remove even five decibels by absorption, wheras a simple process change or machine re-design could reduce the level by 10 or more decibels.

In those cases where the problem is to prevent passage of noise through walls, acoustical absorption is virtually useless, and the so-called "treatment" isn't really a treatment after all.

"Acoustical treatment" refers to the use of materials, constructions, systems, or combinations of all three to:

1. Absorb sound.
2. Isolate noise sources.
3. Insulate rooms from sounds produced elsewhere.
4. Prevent passage of sound out of a building to the surrounding neighborhood.

Sound Absorbents

Sound absorbents are materials which absorb acoustic energy and convert it to a different form of energy—usually heat. Acoustical tile is a common form of acoustical absorbent. Hanging baffles, functional absorbers, mineral or glass wool batts or blankets, panels covered with or containing absorptive materials are also types of acoustical absorbents.

The principal use for absorbents is to prevent or reduce reflection of acoustic energy which strikes them. This prevents reverberation or the multiple echoes which can build up to a noise level substantially higher than that of the noise sources.

Obviously, absorbents *can't* reduce the level of the source. A noise generator, such as a noisy machine, will continue to make as much noise whether these absorbents are in the room or not. However, in a reverberant space, the noise level is usually far higher

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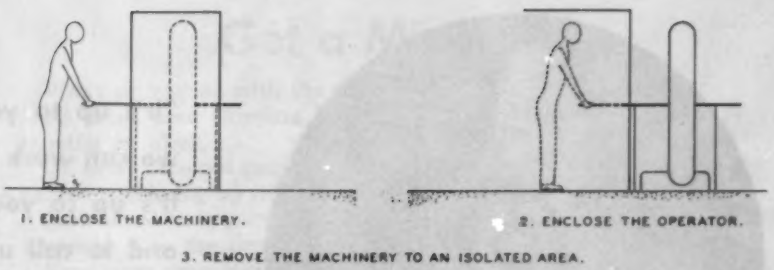
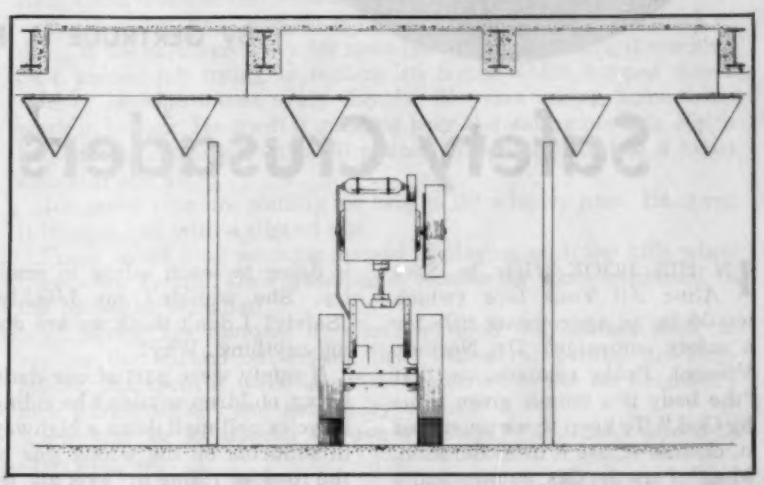
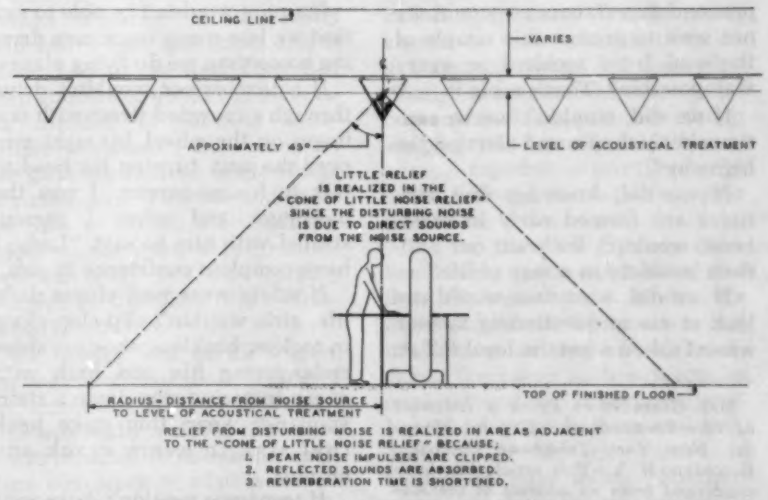


ISOLATING DISTURBING NOISES. Any one or a combination of these three methods will reduce noise levels.



COMBINATION of acoustical absorbent material and semi-barrier construction helps reduce sound being radiated by a machine.


CEILING LINE
VARIES
APPROXIMATELY 45°
LEVEL OF ACOUSTICAL TREATMENT
LITTLE RELIEF IS REALIZED IN THE "CONE OF LITTLE NOISE RELIEF" SINCE THE DISTURBING NOISE IS DUE TO DIRECT SOUNDS FROM THE NOISE SOURCE.
TOP OF FINISHED FLOOR
RADIUS = DISTANCE FROM NOISE SOURCE TO LEVEL OF ACOUSTICAL TREATMENT
RELIEF FROM DISTURBING NOISE IS REALIZED IN AREAS ADJACENT TO THE "CONE OF LITTLE NOISE RELIEF" BECAUSE,
1. PEAK NOISE IMPULSES ARE CLIPPED.
2. REFLECTED SOUNDS ARE ABSORBED.
3. REVERBERATION TIME IS SHORTENED.

AREAS BENEFITED by an installation of acoustical absorbent material. Little relief is realized in the conical volume.

"It's up to you men to realize that we can work side by side with you. It's up to you to mobilize this force and to call upon us to really do a job—a united job—in the safety field"

By GERTRUDE H. FRESE

Safety Crusaders in Skirts

IN HIS BOOK, *How to Stay Alive All Your Life* (which would be an appropriate title for a safety campaign) Dr. Norman Vincent Peale reminds us that "the body is a temple given to us by God." To keep it, we must feed it, cleanse it, use it in moderation. Most of us do this automatically without thinking of it as a temple. That is, we care for ourselves as far as we can through good nutrition, sleep, shelter and clothing.

But the Bible says, "Know ye not that the body is the temple of the soul?" If we could fully comprehend this statement, would we not seek to protect this temple of the soul from accident in every way possible? That's a big *if*.

If we did, wouldn't we be cautious in the home and alert on the highway?

If we did, knowing that attitudes are formed early in childhood, wouldn't we train our children in safety as a way of life?

If we did, a mother would not look at me in questioning fashion when I asked what the local P.T.A. is doing to teach safety to small fry. She wouldn't say blankly, "Safety! I don't think we are doing anything. Why?"

If safety were part of our daily living, children wouldn't be riding bicycles pell-mell down a highway in suburbia on the wrong side of the road, or riding in "look ma, no hands" style.

If parents wouldn't be rushing to the railroad station, the wife in curlers, a coat over her pajamas. Nor would the husband try to drive and drink a cup of coffee at the same time.

If a pilot wouldn't be able to say that we lose many more men driving home than we do flying planes.

If a taxi driver wouldn't drive through a crowded street with one finger on the wheel, his right arm over the seat, turning his head to talk to his passenger. I was the passenger and when I remonstrated with him he said, "Lady, I have complete confidence in you."

If safety were part of our daily life, girls wouldn't clip-clop along in toeless, backless, shoeless shoes endangering life and limb with every teetering step down a stairway; nor wear, thin spike heels that sink in every crack and cranny.

If teenagers wouldn't drive with one arm out the window as their dads do—or, worse, ride with baby shoes, dice, scarves and feathers dangling on the rear view mirror.

If safety thinking and protection of our body were part of our daily living, a father wouldn't try to board a train as it picks up speed pulling out of the station.

How can we eliminate these big "ifs"? How can we get people to believe the body is the temple of the soul? How can we get them to "stay alive all their lives?"

The remedy, of course, is a properly conditioned state of mind within the individual. The individual must be impressed with the advantages of safeguarding himself against accident and then be given no opportunity to forget these advantages.

In trying to save people from themselves, every device, every school of thought possible is needed and should be used. But ideas, devices and schools of thought are not of themselves sufficient; we need to enlist people—millions of people—if we are to make safety-consciousness a way of life.

This brings me to my theme, "The Power of Women As a Force for Safety." This is not a new subject. Women and the power of women we have had with us always! The Women's Activities

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MRS. GERTRUDE H. FRESE is Assistant to Vice-President and General Manager, New York Telephone Company, Brooklyn, N. Y. This article has been condensed from an address at the Annual Meeting, 45th National Safety Congress, October 21, 1957.

Conference of the National Safety Council this year adopted as its goal, alerting all women to the fact that they are the "guardians of safety" for themselves and their families.

The power of women which can and must be applied in the safety field is acknowledged by all—men and women alike. It derives very naturally from the status of American women, developed down through the years to our position in society today. Women's natural basic instincts tend toward caution, security, love, family stability and protection of the young. We have qualities of intuition frequently not possessed by men. We are the mothers, the teachers of the young, the homemakers of the nation. We are more social than men and set the standards of social conduct and morals.

Worth-while Projects

One event which I think was interesting, particularly in a woman's field, was a fashion show which featured such items for traffic safety as: white umbrellas, white overshoes and white raincoats for pedestrians. Another organization, the American Council of Railroad Women, has a code called "Good manners are good business," and item three is a rule as to how a woman should act as a pedestrian and a driver.

I have attended many club board meetings, the purpose of which was to find a project for the club year. Women in every town, city and village are searching for a worthwhile endeavor for the club to work for. Safety programs of all types promoted by women's clubs everywhere in the United States could have a powerful effect in helping to reduce accidents, particularly if the clubs banded together in the community for a common purpose.

In a New York safety conference, a general of the United States Army was quoted as saying "I can keep the boys safe while they are at camp—our safety record is good—but I can't keep them safe when they leave home too late, to drive too far, too fast. It's the mothers of America, the fathers of America, the homes of America that are murdering American boys."

Well, a number of telephone women working in the safety field heard that quotation, and it added fuel to the fire. They had been concerned about the increasing number of off-duty automobile accidents. Too many of our girls are injured while riding as passengers. This seemed to be the time to launch a crusade for safety on the road; a program of "women only," for the working women, of the New York Telephone Company.

We needed first of all a plan, and we called that plan "You Are Important as a Woman in Traffic." This was really a clever title since it was directed to telephone operators who work in what is known in our company as the Traffic Department. Telephone calls are known as traffic in my business. The crusade was an entirely new thing for us really because it called upon every female talent known to man—charm, tact, ingenuity and love. All these distinctive characteristics were to be concentrated on just one thing: keeping the family together—alive, together—particularly when dad and the son took over the wheel.

We in the Bell System have been doing quite a bit along the lines of leisure time safety. We have published informative and interesting material on safe vacations. We cover such subjects as over-exhaustion, poison ivy, sunburn, and other bothers and hurdles in the obstacle course of today's summer living. Furthermore, we have every reason to

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Got a Minute?

WHAT DO YOU do with the time you save?

Al saves time skipping lunch and other meals. He spends it nursing an ulcer.

Gil saves time not going into detail instructing his employees. He spends it clearing up mistakes and filling out scrap reports.

Jack saved time going 40 mph. in a 25 mph. business zone. He's spending it in the penitentiary for manslaughter of a pedestrian.

Sam saves time taking happy pills to keep him going all hours. He spends it with his psychiatrist.

Maggie saves time dragging the kids across the street in the middle of the block, going to the grocery. She spends it waiting in line at the checkout counter.

Arty saved a couple minutes taking a hazardous short cut on his machine. He spent it talking with Jim, who sneezed in his face. Arty lost a week in bed with Jim's flu bug.

Marty saved time putting a penny in the fuse box, instead of going to the hardware store for more fuses. He's spending it working on a second job trying to replace his house which burned down.

Marv saved minutes every day for 20 years racing home from work in his car. He spent it guzzling beer and eating pretzels which helped him put on an extra 40 pounds of weight. He had a heart attack at age 45.

Joe saved time not waiting for help to lift a heavy part. He spent it lying in bed with a slipped disc.

Frank saved time working instead of playing with the kids when they were young. He's spending it wondering what happened to the babies he once had.

Ed saved five minutes by climbing upon the cabinet shelf to replace the burned out ceiling light instead of getting the stepladder. He spent it walking across the street to see his neighbor's new fishing tackle, and got hit by a bus.

So—why be so anxious to save a minute? You can't afford to save that way!

—ROBERT D. GIDEL

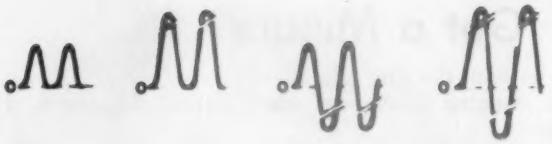

FIGURE 1. Normal breathing pattern. Adult has a vital capacity of about 4,000 c.c., according to Dr. Archer S. Gordon, University of Illinois.

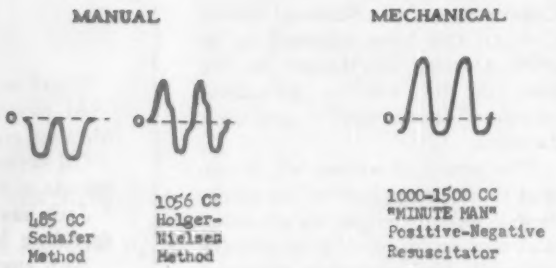

FIGURE 2. Respiratory curves during artificial respiration shows why Holger-Nielsen method is recommended. Positive-negative resuscitator is even better.

Respiratory Emergencies

The first five minutes determine life or death. A plan of action, good equipment, and trained men will save lives

By ESTHER MYERS STEPHENSON, R.N., B.S.

EMERGENCIES involving the respiratory system can happen anywhere, any time. The causes are many, but the methods of treatment are relatively few. The important thing is to start treatment as promptly as possible.

Abnormal breathing may be slow, shallow, and/or labored and usually results in some degree of hypoxia. These conditions may require surgery or drug therapy along with oxygen therapy. Administering oxygen is a simple procedure requiring inexpensive equipment such as a nasal catheter, oro-nasal or nasal mask, or a demand-type oxygen inhaler.

The liter flow of oxygen should be adjustable to assure the amount needed by the patient and to prevent waste. Unless the apparatus supplies a concentration of at least 35 per cent oxygen in the pharynx, it may be serving little or no purpose.

When a person stops breathing, treatment must be immediate and effective. Supplies and equipment must be available and personnel must be well trained in applying artificial respiration by manual or mechanical means. Four specific objectives must be accomplished:

1. Enough oxygen must be administered to meet the metabolic demands of the tissues—especially those of the vital organs: brain, heart, etc.

MRS. WILLIAM H. STEPHENSON is associated with her husband in the Stephenson Corporation, manufacturers of resuscitation equipment, Red Bank, N. J. The accompanying article was originally presented at the 12th International Congress on Occupational Health, Helsinki, Finland, July 1957.

2. The lungs must be adequately ventilated, thereby providing the means of eliminating excess carbon dioxide which accumulated during the apneic period and maintaining a normal acid-base balance throughout the treatment.

3. Circulation must be aided by increasing venous return and cardiac output.

4. Artificial respiration must be employed to provide effective and uninterrupted treatment until breathing returns, without causing oxygen toxicity, hyperventilation or hypoventilation.

To accomplish these objectives, the equipment and personnel must be available and the right method must be selected. In choosing a method, consider the normal breathing pattern. Figure 1 shows the normal tidal exchange of 500 c.c. of air, the inspiratory reserve volume of 2,500 c.c., the expiratory reserve air of 1,000 c.c. —giving a vital capacity in the

adult of about 4,000 c.c. This is based on work done by Dr. Archer S. Gordon of the Department of Clinical Science, University of Illinois Medical School.

Manual Methods

There are six methods of manual artificial respiration:

1. Back pressure only.
2. Chest pressure only.
3. Back pressure-arm lift.
4. Chest pressure-arm lift.
5. Hip lift-back pressure.
6. Hip roll-back pressure.

These methods were studied by the Armed Services Medical Center along with other interested organizations. Each was evaluated in respect to the amount of gas exchanged, the fatigue of the operator, and the ease or difficulty in teaching the technique. It was recommended that the Holger Nielson back pressure-arm lift method be substituted for the Schafer back pressure as standard practice.

Figure 2 illustrates the respiratory curves during these two latter methods. The manual Schafer method provides pulmonary ventilation of approximately 485 c.c. of expiratory reserve air, whereas the Holger Nielson method, properly practiced, gives an exchange of 1,056 c.c. of both tidal air and expiratory reserve air.

A mechanical resuscitator operating on the principle of 14 m.m. of mercury positive pressure will generally provide a tidal volume of 1,000 to 1,200 c.c. of 100 per cent oxygen or oxygen-air in the adult at a rate of 12 to 15 respirations per minute. This assures a minute volume of about 15,000 c.c. — an increase in pulmonary ventilation of 50 per cent over the normal.

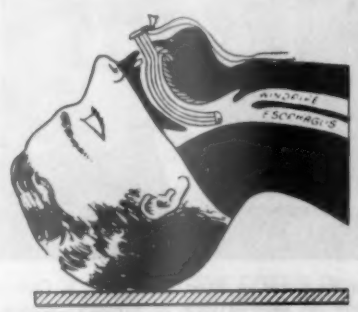

FIGURE 4. Wire airway curves behind tongue, is used when victim is unconscious and not breathing.

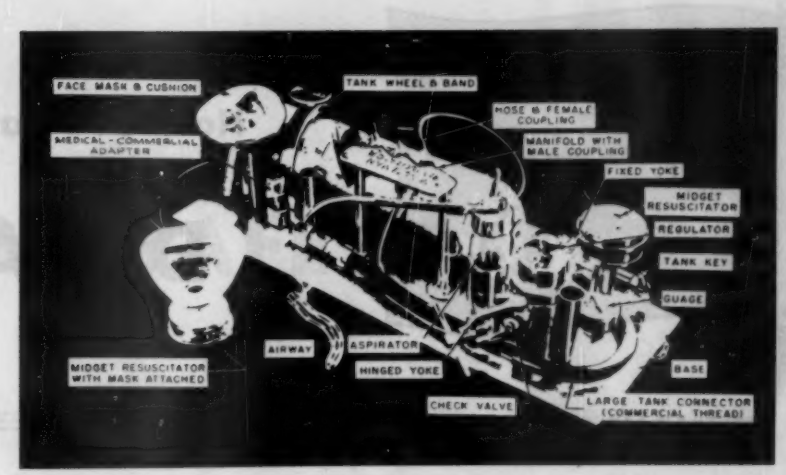

FIGURE 3. The "Minuteman" resuscitator can be adjusted to give from 100 per cent oxygen to 50 per cent air and 50 per cent oxygen. It can handle two patients.

Since the tidal and minute volumes of children are much less, a resuscitator must be able to slow down its rate, delivering a diminished volume of oxygen or air per minute. Otherwise, the rapid rate may increase the turbulence of gas to such a degree that the mechanism can start tripping before the gas reaches the alveoli. This means that when used on children, the resuscitator must be slowed down in proportion to the normal physiological minute volume requirement.

A mechanical resuscitator producing alternating positive-negative pressures has many advantages over manual artificial respiration:

—It administers 100 per cent oxygen or oxygen-air over a long period of time and maintains a regular rhythm and a constant volume of gas exchanged.

—The amount of tidal volume is regulated according to the patient's lung capacity at a set positive and negative pressure, thus providing for an adequate supply of oxygen and elimination of carbon dioxide.

—Circulation is improved in shock by increasing the venous return and cardiac output during the negative phase of the breathing cycle. Blood pressure is improved when going from manual positive pressure to mechanical positive-negative pressure. Resuscitators having alternating positive-negative pressures also improve blood pressure as compared to those operating on intermittent positive pressures.

—It gives warning of an airway obstruction by a rapid tripping sound of the mechanism and presence of respiratory effects by a fast, irregular tripping sound.

Figure 3 shows one of the several resuscitators on the world market. It contains an oxygen tank in one yoke, with provision for a second tank in the hinged yoke. The two resuscitating mechanisms breathe simultaneously and independently for two patients. Each can be adjusted to give from 100 per cent oxygen to 50 per cent oxygen and 50 per cent air. Rate of breathing and the pressures can be varied as indicated. An aspirator to remove

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FIGURE 5. Mask must be applied airtight to prevent leaks. Chin must be held up and forward to assure an airway.

How you can help the Scouts

DO A GOOD

DEL-MAR-VA COUNCIL LINES UP SAFETY EXPERTS

By THOMAS R. DEW

PRESIDENT EISENHOWER, on February 20, 1957, issued a challenge to the Boy Scouts of America.

"I urge you," he wrote, "to adopt safety as your service project for 1958. Through the concerted action of your members, and in cooperation with other organizations, you can alert the public to the urgent need for reducing the tragic toll of accidents.

"This is an opportunity for service to your country in the highest tradition of the Boy Scouts of America."

The Boy Scouts accepted the challenge, and thus the 1958 National Safety Good Turn was born.

By summer, the first information on the national project had been transmitted to the Del-Mar-Va Council. Organization for the Good Turn presented a monumental problem, for the council covers Delaware and parts of Maryland and Virginia in a peninsula some 200 miles long and 60 miles wide at its broadest point.

The council was ready. It handed the problem to J. Sharp Queener, its health and safety committee chairman. Mr. Queener is manager of the safety and fire protection division of the Du Pont Company and off-the-job safety committee chairman of the Industrial Conference of the National Safety Council.

That took care of the general chairman, but the rest of the organization still had to be effected. How best to develop a program aimed at interesting youth in safety, arousing public concern for safety, establishing cooperation between safety organizations and the Boy Scouts, and making safety an integral part of the Scouting program?

"Bring in experts in the various fields we want to cover" was the answer—and it was quickly discovered that many of these experts already were volunteer members of the Scouting organization and were more than willing to offer their professional safety experience.

By August 23, Mr. Queener was ready to start the serious work of organizing the council's participation in the Good Turn. On that date, a preplanning meeting of Scouting and safety organization representatives was held, and a general outline of the program and Good Turn organization established.

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THOMAS R. DEW, a Scout volunteer, assists with publicity for the Del-Mar-Va Council.

SAFETY GOOD TURN planning gets underway at the Del-Mar-Va Boy Scout Council. Left to right: James J. Ashton, manager, Delaware Safety Council; J. Sharp Queener, general chairman, Del-Mar-Va Council Good Turn Committee, and Peter C. Paulson, Council Scout Executive.

THREE SCOUTS—an Explorer, a Boy Scout and a Cub—help pass out literature on safe driving in Rodney Square, Wilmington. Auto wreck exhibit, which will tour state, was secured through efforts of Delaware Safety Council and Delaware National Guard.

TURN FOR SAFETY

CREVE COEUR COUNCIL USES "SAFETY SALESMEN"

By FRED J. TUERK

THE CREVE Coeur Council, Boy Scouts of America, at Peoria, Ill., lives by that forceful Scout slogan, "Be prepared." It expresses the philosophical and practical approach to Scouting's big national program, "Safety Good Turn—1958," which gets under way in February.

Led by Dr. Sidney Neuwirth, Creve Coeur's Safety Good Turn Steering Committee has loaded its guns and set its sights ready to hit the target that will be raised in a few weeks.

"Each local Council will determine its own program in the 1958 Good Turn plan, but a basic pattern must be followed at the Council level if the program is to succeed," says Dr. Neuwirth. "The pattern may differ but the ultimate goal is the same: to get safety inculcated in the hearts and minds of all Scouts and to spread good example through words and actions in the community and in the home."

Much of the preparatory planning has been done by the chairman of the steering committee and the six committee chairmen.

These key men, plus H. S. Simpson, safety manager for Caterpillar Tractor Company and chairman of liaison between the Boy Scouts and the National Safety Council, have discussed preliminary plans with the Creve Coeur Council Scout executive who, in turn, has communicated with council staff members to determine staff responsibilities relating to the over-all program.

The Council Health and Safety Committee has outlined the general plan for the council's part in the Safety Good Turn program.

The committee now plans to meet with the board and officers of the eight districts encompassed in the Creve Coeur Council for a kickoff dinner meeting sometime prior to February. Up to five men from each of the eight districts will hear the factual and inspirational material that will make up the program when the national program begins. At this time all participating units will be presented a plaque designating their intention to put considerable effort into the plan.

Plans for merchandising the programs formulated by the various committees will be funneled

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FRED J. TUERK is Communications Editor, Caterpillar Tractor Company, Peoria, Ill.

Be Prepared

For the

1958 SAFETY GOOD TURN

of the Boy Scouts of America

Theme for

March, April, May—

TRAFFIC SAFETY

CREVE COEUR Council Safety Good Turning Steering Committee. Left to right: Robert Jamieson, Peoria School Board President (home and school); Douglas Proctor, Peoria Red Cross (outdoor and recreation); Dr. P. S. Neuwirth, dentist (Council health and safety chairman); H. S. Simpson, Caterpillar Tractor Co. (committee chairman); Fred J. Tuerk, Caterpillar Tractor Co. (publicity); Dan Hanson, Peoria Traffic Engineer (street and highway), and Al Thannum, LeTourneau-Westinghouse (A.S.S.E. safety salesmen chairman).

CHRISTIAN H. ZOLLER, president, addresses a group of Schmidt employees at safety rally in Bottle Shop.

Grand Slam for Schmidt's

In 9 years, this brewery's accident frequency went from 33.2 to zero, setting an industry record. Here's how

THE SIX men seated in the offices of a Philadelphia brewery early in 1945 wondered what they could possibly do to help reduce accidents in the plant. Little did they realize that they were about to begin a job which, a few years later, was to set an all-time industry record of 19 months and 3 million man-hours without a disabling injury.

The six employees of C. Schmidt & Sons were meeting at the invitation of Assistant Brewmaster William A. Hipp to discuss the formation of a safety committee. Bill Hipp had just been handed the additional duties of safety director and before the meeting adjourned a safety program was born.

The committeemen met monthly on company time and quickly began an educational campaign. National Safety Council material —slide films, posters, and literature on safe practices—was distributed throughout the plant.

As the brewery grew larger the committee was expanded and a supervisors' safety council was formed. Both groups attended separate monthly meetings.

A system of safety records was installed and the statistics were used to show both the committees and employees the progress being made. Injuries sustained during the month were discussed and ideas to eliminate them in the future were invited. Suggestions pertaining to specific hazards were requested and a systematic inspection of the plant was made. The job was not easy, but by 1947 a noticeable decrease in injuries had resulted.

At this time Safety Director Hipp convinced top management of the need for a plant dispensary. He obtained the full-time services of a registered industrial nurse and made arrangements for a doctor to visit the plant three days a week. Many minor injuries, formerly sent out to a nearby hospital, were treated in the dispensary—a great saving of time. Furthermore, these injuries could be checked on a day-to-day basis, which helped control infection. The result was a sharp decrease in medical costs.

By 1948 Bill Hipp's growing work schedule made it impossible for him to concentrate effectively on his safety duties, so he was given an assistant. William A. Mulvenna, a 20-year veteran bottler and secretary of the safety committee, was selected to assume full-time duties as assistant safety director .

Safety Teams. Mulvenna attended the Philadelphia Safety Council's courses on safety and fire protection and, later in 1948,

LEFT: "Careless Charlie" is laid to rest at annual safety banquet. Displayed in department heads' offices, Charlie advertised injuries in those departments.

ALL EMPLOYEES belong to safety teams. For a perfect three-month safety record, a team receives a prize, the recipient of which is determined by lottery.

completed a National Safety Council course in Chicago. Back on the job, he wasted no time in putting his training into action. One of his first steps was to form employees, in groups of 15 to 30, depending on the hazard involved, into safety teams.

These groups elected team captains who were invited to attend monthly safety meetings. The idea was to get closer to the employees on the line and to make each man his brother's keeper.

Contests. As an incentive, every team working three months without a disabling injury received a useful household article as a prize, the winner being determined by a group drawing with the team captain presiding. This idea was well received and is still being used successfully.

Other contests have been conducted from time to time as an added incentive to work safely. One such award was a lapel pin for each employee who worked a full year without a disabling injury. This practice was to continue on a yearly basis until after the fifth year, when the yearly pin was to be discontinued. The next pin would be for 10 years. Employees wear the yearly pins proudly and look forward eagerly to receiving another one.

"Careless Charlie" was introduced in 1948. He was a laminated wood figure of a man with his head and eye bandaged, his arm in a sling, his foot bandaged, and hobbling on a cane. When a disabling injury occurred, Charlie was placed in the office of the head of the department involved until an injury occurred in another department. Naturally, department heads were anxious to avoid this stigma and tried to make sure their employees worked safely.

Careless Charlie was appropriately laid to rest, after fulfilling his mission, at the annual safety banquet in 1950. Later on, a "belittling barrel" was introduced to serve the same purpose,

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DISPLAY of safety equipment available to employees.

FIRE Prevention Week exhibit shows portable equipment.

OUTSIDE surfaces of double-hung windows are reached most effectively from the outside. It needs window hardware and a safety belt.

$4 BILLION WELL SPENT

That's the current annual labor cost of keeping industry's house clean and sanitary. Research in industrial sanitation is getting more for the cleaning dollar

KEEPING the work place clean has become a complex and specialized job. Industry can no longer afford to do it casually and haphazardly.

With more than 60,000,000 persons employed in the United States and labor costs steadily mounting, efficient maintenance takes on increasing importance. It warrants critical consideration of organization, methods and materials involved in cleaning maintenance of industrial and commercial property.

Most of those employed work in buildings. They also spend time in places of assembly, entertainment and travel while outside their homes. These structures have many specific purposes—office work, selling merchandise and services, entertainment, accommodations for transients, medical care, education, and a wide variety of manufacturing processes.

Those who work on production or services are normally engaged in their own jobs and have only an incidental interest in the buildings and their upkeep. Yet these people while carrying on their regular jobs contribute soil and disorder. It must be countered by industrial, building or institutional sanitation.

Industrial sanitation is defined as the maintenance of essential cleanliness, order and safety in the work environment. It is best performed not by those engaged in production but by qualified supervision and personnel em-

TRAINING, both on the job and in more formal classes, helps to develop an efficient cleaning force.

USE OF a trash cart in the cleaning of ash trays and removal of waste paper is part of the office cleaning routine.

CARE OF exterior areas is important. Sidewalks and gutter areas can be swept quickly with a mechanical sweeper.

ployed specifically for this purpose.

Some 2,000,000 persons are now employed in cleaning maintenance, according to the Association of Soap and Glycerine Producers, Inc. That means 16,000,000 man (and woman) hours a day applied to the cleaning of buildings and equipment, with labor costs estimated very conservatively at $4 billion a year.

These facts are presented in a book, *Building and Equipment Sanitation Maintenance,* recently published by the Association. The authors are J. Lloyd Barron, director of sanitation for National Biscuit Company, and Albert J. Burner, supervisor of cleaning standards for the Port of New York Authority.

Publication of this 60-page illustrated booklet coincided with the first meeting of the newly consolidated Institute of Sanitation Management on October 14, 1957, at the Second International Sanitation Maintenance Show and Conference in Chicago. The Institute has enlisted nearly 500 top management representatives in the promotion of more efficient handling of industrial sanitation and building maintenance.

The book views modern sanitation as a highly-organized self-contained function performed by trained personnel responsible directly to top management. This spells the end of the era "leave it to the janitor."

To maintain the work environ-

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STRIPPING and refinishing resilient floors can be done effectively by a three-man crew. Both hand and mechanical methods are used.

IDEAS THAT WORKED

Devices and Ideas to Help Your Safety Program

By Arthur S. Kelly, Industrial Department, NSC

Chain and Clamp End Tipping Trailers

Plants that ship a lot of material by truck can use this idea. Trailers are frequently backed up to the loading dock and unhooked, remaining there until loaded. When fork trucks loaded with material run onto the back of these trailers, the front end tends to raise. Frequently this has resulted in the fork truck and the operator being dropped down between the dock and the back of the truck and serious injuries have been reported.

The problem of holding down the front end was whipped by a very ingenious method shown here. Because trailers or semi-

trailers are not of equal length, a piece of used railroad rail was set in the concrete floor of the loading dock. A clamp with a short piece of chain and a safety hook was put on this rail.

The clamp is slid up to the dolly axle and a chain wrapped around and fastened back into itself. A latch-type safety hook is used to prevent the chains becoming unhooked by the jiggling and vibration of the truck.

Submitted by Fred Trobaugh, safety engineer, Keystone Steel and Wire Co., Peoria, Ill.

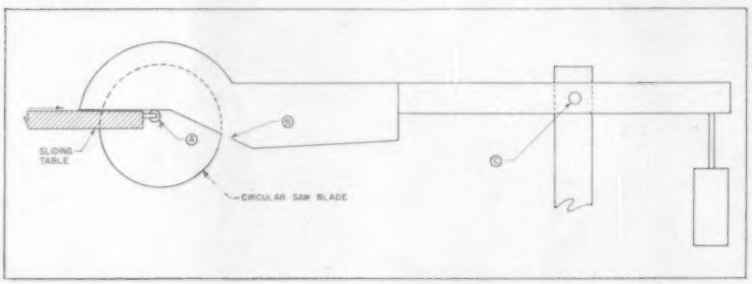


Table Saw Guard

This drawing illustrates an effective guard for a sliding table saw. It completely encloses the blade except when stock is being cut.

As the sliding table is pushed forward, a small cam wheel (A) comes in contact with the side (B) of the sheet metal guard, raising the guard as the stock approaches the saw blade. Amount of blade exposure is determined the length of side (B).

The location of pivot point (C) is determined by the length of side (B). The counterbalance at the end of the guard insures easy operation.

Submitted by W. L. Smith, Liberty Mutual Insurance Company, Indianapolis, Ind.

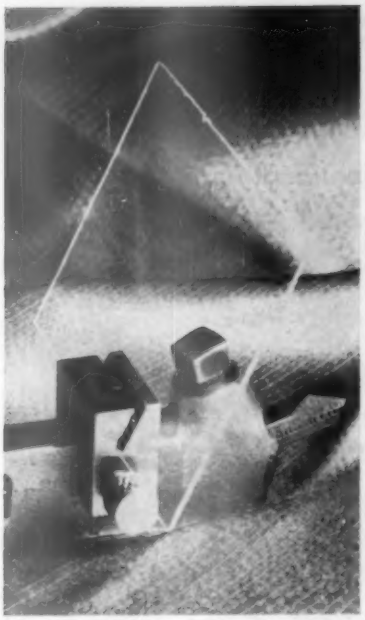
Safety Slogan Contest

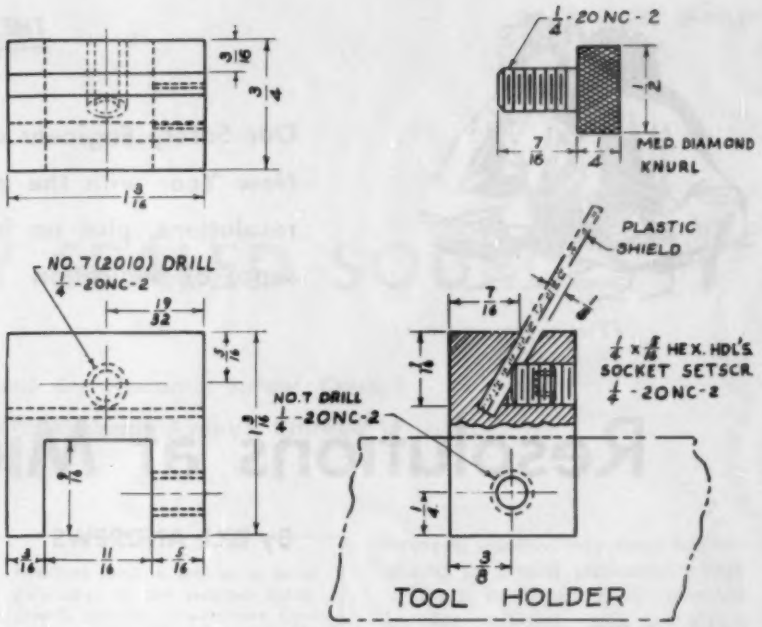
Here's another contest idea submitted by R. M. Plotts, manager, protective services, Frigidaire Products of Canada, Ltd., General Motors Corp., Toronto, Ont.

On a large safety board at the plant entrance the following information is shown: The number of man-hours and man-days since the last disabling injury, the previous record of man-days and man-hours without a disabling injury, and a safety slogan.

Each day the clock number of an employee is drawn and posted on the board. The employee whose number is posted calls the Safety Department and is asked a question pertaining to the information on the board. If he gives the correct answer, his name is placed in a special container. Each week one name is withdrawn from the container and that person receives a National Safety Council automatic pencil.

Mr. Plotts reports that this contest, as well as the one he reported in the November issue, has successfully stimulated interest among all employees and supervision.





Flying Chip Shield

An eye injury to an engine lathe operator caused by a flying chip of cast iron started a contest by the Safety Foremen Guild to design a device to protect operators' eyes.

The illustration shows the result. The guard is clamped to the tool holder. It is adaptable to a number of other machine tool operations. Shields and holders are stocked in shop tool rooms and operators are instructed to use them.

Submitted by C.F. Van Nortwick, shop superintendent, Cleveland Public Schools, Cleveland, Ohio.

December's Winner

Winner for December was Robert C. McCoy, Wolverine Tube, Division of Calumet & Hecla, Detroit, Mich. He submitted the item about the rope tester for detecting and eliminating weakened slings.

PRIZES FOR IDEAS

For the best idea printed each month, we will award $15 worth of merchandise of the winner's choice from the NSC Incentive Catalog, or a personalized copy of the Accident Prevention Manual. Prizes totaling $25 will go every six months to the best of the monthly winners.

Send a brief description with a photo or drawing to "Ideas That Worked," National Safety Council, 425 N. Michigan Ave., Chicago 11. Any idea, gadget, or home-grown invention that is preventing accidents in your plant is eligible.

Can't Read English; 1 Dies, 2 Hurt

New York State Labor Department investigations show that of seven employees working together in the plant of Michelle, Inc., Brooklyn, at the time of a flash fire November 13, the four English-speaking workers were unhurt or slightly hurt while the three non-English speaking workers were seriously injured. One died the day following the fire.

Department experts believe that lack of knowledge of proper safety procedures and lack of ability to read English safety signs on the part of the non-English speaking workers was a major factor in the differences in injuries.

As a result of investigations of this fire and two previous fires in similar plants, two divisions of the State Department of Labor have begun a comprehensive check of the pearlizing industry and all other plants where lacquer or similar products are sprayed or dipped and air dried, it was announced by Industrial Commissioner Isador Lubin. The units are the Division of Safety Service and the Division of Industrial Hygiene.

The Department is initiating a campaign to get industry to educate workers, in language they will understand, to the hazards of the processes they use, the safety precautions necessary to avoid accidents, and the proper procedures to follow in case of accidents.

Department investigations have uncovered evidence that poor housekeeping in the plants which may not be in violation of the Safety Code is a factor in these catastrophes.

A man should never judge by appearances. A woman who looks like a dumb blonde may really be a bright brunette.

(Fiction)

Our Safety Engineer enters the New Year with the conventional resolutions, plus an increased sense of dedication

Resolutions at Mid-Career

By BILL ANDREWS

January 1, 1958

When you're young you can tackle the New Year as a spectacularly new adventure. You can dream great dreams of success and promotion, self-improvement, reform of bad habits and strengthening of good ones. You can hope that in another year you will be something very different and much better than you were.

What's more, once in a while, these changes do come in a year.

But there come other years when a man isn't yet old, but when he knows he isn't young. He hasn't yet enshrined his foibles and prejudices into a hallowed tradition to be defended at all cost, but neither does he expect to remake the world or himself in a year.

So, come New Year's Day, resolutions are still in order, but they are resolutions of change within a narrow range, campaigns to be waged for limited objectives, attacks upon faults that are, at least in part, only adjustment to faults we do not realistically hope to overcome.

So, here are the 1958 resolutions of a man at just about the mid-point (granting life and health) of a career as a safety engineer.

What do I resolve to do in 1958 that is not already an established pattern of my life?

First, I know that I must learn to be more receptive of the ideas of other people. Standing, as any responsible safety director must stand, as the critic, judge, and often the rejecter of the ideas of others—my juniors, the operating men, top management, my colleagues, and the scientific men—I need some measure of confidence in my own right judgment.

And, though I've known self-doubt, I think that I'm abundantly equipped with the quality of trust in self. It is by no means so easy for me to sift out the grains of good wheat that are buried in the chaff of nonsensical brainstorms from all sources. I must become a more patient sifter of that chaff.

Second, I resolve that in 1958 I will step up the pace of my own education. The world doesn't stand still, and there pours out into the minds of men both a flow of rejections of formerly accepted truths and new insights into what was formerly unknown. I need more than the education that comes by chance—the casually-read article, the verbal advice of a wise man, the formal papers of a safety congress. One thing I must do is read by a more consistent plan a series of substantial works. Beginning, I think, with the area of my greatest ignorance—radiation hazards and their control.

Third, I must learn to care more for the people around me. Always there is, for the man who reduces his work to statistical reports, a danger of dehumanizing the intensely human. It is not just that I must learn a closer feeling of brotherhood to those whom I professionally seek to protect—though that is part of it. It is also a concern for the person who is my boss, my equal, or my junior on the organization chart.

It is easy for me to do a fair job of this with my juniors, with the boys whose careers I seek to guide. That relationship is enough like that of father to awake some of the affections of a father.

It is not so easy to find that feeling for the general manager to whom I report, or to the plant superintendent with whom I sometimes agree and sometimes disagree in the cross-table controversies of business equals.

With both boss and equal, I tend too much to think in terms of obstacles to be removed or opportunities to be exploited. The welfare of the man drops out of sight in the effort to evade or make use of the influence of that man for the welfare of my own career. And when you lose the sense of the importance of the individual who confronts you, you lose something of great intrinsic worth—you are in danger of coming to a view of men as cold, sterile and abstract as that an accountant holds on the subject of money.

Finally, I resolve to seek the

—To page 103

A NATIONAL SAFETY COUNCIL
TECHNICAL SERVICE

DATA SHEET D-461

BETA RAY SEALED SOURCES

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425 North Michigan Avenue, Chicago 11

General

1. Because of their unstable nuclear structure, certain of the elements, either naturally occurring or produced through nuclear reactions, have been found to exhibit a spontaneous disintegration. Such disintegration occurs with more or less continuous emission of rays and/or particles and a gradual transformation of the original elements into more stable elements that generally have different chemical properties. The phenomenon continues independent of any external physical or chemical influence and is termed "radioactivity."

2. The radiations emitted from radioactive materials consist of three different basic types. They are commonly identified as *alpha*, *beta*, and *gamma* rays. The first two, alpha and beta, are particles of matter. The third is an electromagnetic type of radiation, the same as the X-ray except for its energy and method of production.

3. Beta radiation is particularly well adapted for certain industrial purposes. Because of their industrial application, materials emitting beta rays as their only primary radiation have been sought out. Fission products are a major source of pure beta emitters. It is usually necessary to separate the beta-emitting elements from alpha and gamma emitters as they come from the nuclear reactors. The important pure beta-emitting fission products are: strontium-90, yttrium-90, technetium-99, promethium-147.

This Data Sheet is one of a series published by the National Safety Council, reflecting experience from many sources. Not every acceptable procedure is necessarily included. Data Sheets should not be confused with American Standard Safety Codes, federal laws, insurance requirements, state laws, rules and regulations, or municipal ordinances.

4. Beta particles are negatively charged high-speed electrons. They move at velocities ranging from 25 to 99 per cent of the speed of light, which is 186,000 miles per second. Because of their small mass and high speed, beta particles travel a greater distance than do alpha particles before their energy is absorbed in surrounding matter. Beta particles possess the capacity to ionize matter which they traverse. Their ionizing effect is less concentrated than is that of alpha particles.

5. Beta particles are more penetrating than alpha particles but considerably less penetrating than gamma radiation. The energy of beta particles is absorbed by thin layers of lead, steel, or wood, or by slightly greater thicknesses of plastic or aluminum. Relatively thin shields of any of these materials can reduce the beta radiation essentially to zero.

6. For use as industrial beta ray sources, the emitters must be contained in sealed packages which will not be significantly affected by the radiation, will not allow any leakage of the radioactive material, and will not absorb too much of the radiation. Some sources have been prepared commercially as plastic or metal sandwiches, while others have the active material deposited in metal foil. The radioactive material has also been simply sealed in aluminum cans.

Uses

7. Beta particles have found some use as sources of energy for "triggering" chemical reactions. In this application, they are most useful in gas phase reactions where the stream of gas can be passed around the beta particle source. The particles can also be used in liquid phase reactions if the liquid layer is kept very thin.

8. A little beta emitter in a gaseous discharge tube will permit faster starting time and a lower starting voltage because the gas is ionized in the tube before the starting potential is applied.

9. One of the widest uses of beta emitters at the present time is for the removal of static electrical charges from rapidly moving insulating materials, such as paper or cloth going through high-speed machines. The beta ray source near the moving web ionizes the surrounding air and permits the static charge to escape.

10. The sealed sources are also used for the gauging of liquid levels in tanks, the gauging of thicknesses in the sheet metal or plastic industries, and the production of self-luminous markers consisting of radioactive material and a phosphor enclosed in a hermetically sealed container.

Radiation Measurements and Limits

11. Quantity and intensity of radiation may be expressed in several different units. The common unit of quantity is the "curie," which is the amount of radioactive material in which 37,000,000,000 nuclear disintegrations occur per second.

12. The common unit of intensity of radiation is the "roentgen." The roentgen is the amount of X-radiation or gamma radiation required to produce a number of ions equivalent to the one electrostatic unit of charge in one cubic centimeter of air under standard conditions. One gram of soft animal tissue absorbs about 93 ergs of energy when exposed to one roentgen of gamma radiation.

13. To measure the dosage of alpha or beta particles in soft animal tissue, a unit called the "roentgen equivalent physical" or "rep" is used. When the tissue absorbs 93 ergs of energy per gram, it has received one rep of alpha or beta radiation.

14. The International Commission on Radiological Units has recommended the "rad" ("roentgens absorbed") to replace the rep as the unit of absorbed dose. The difference in magnitude between the rep (93 ergs per gram) and the rad (100 ergs per gram) is negligible, so that adoption of the rad to replace the rep does not necessitate a change in the numerical values of permissible doses stated in roentgens equivalent physical (rep) heretofore.

15. The maximum permissible dose of external radiation should not exceed 0.3 rep or rad per week, with the following exceptions: 0.6 rep (rad) on the skin, 1.5 rep (rad) for radiation of very low penetrating power, 1.5 rep (rad) on the hands, forearms, and feet.

Design and Handling of Sealed Sources

16. The manufacturer of sealed beta sources should ensure safety for the transportation company and the user before shipment of the source. Each container should be shown, by the scrub test and by a proportional counter, to be free from leakage of radioactive material. There should be no hazardous quantities of radiation from the source when it is enclosed in a shipping container.

17. The source and container should be resistant to corrosion both by the contents and by any external exposure which can be reasonably predicted. The container should also be safe from any build-up of gas pressure internally and from any build-up of electric charge from beta ray bombardment.

18. The source and container should be of rugged construction so that there will be little probability of breakage from thermal or mechanical shock or from vibration either in normal use or from such violence as might be foreseen in a wreck or fire during transportation.

19. Design of the sealed source should be such as to minimize dispersion of the radioactive materials if the container is damaged. If at all practical, the source material should be other than gas, liquid, or loose powder.

20. Such methods as welding, crimping, soldering, or peening should be used in construction of the container, so that disassembly of it will be virtually impossible.

21. A complete instruction manual should accompany each source from the manufacturer. It should indicate the following:

a. Procedures during normal operation to ensure health protection from radiation.
b. Procedures during shutdown storage to ensure health protection from radiation.
c. Procedures for moving or installing equipment to ensure health protection from radiation.
d. Procedures in case of accident and possible rupture of the source to ensure health protection from radiation.
e. Description of the most severe environmental conditions permissible for the operation, including maximum and minimum temperatures and pressures, maximum humidity, limits of vibration, and limits of exposure to detrimental atmospheres.

22. A durable label should be firmly attached to each source container, indicating the manufacturer's name, the serial number of the source, and the chemical symbol and atomic weight of the radioisotope contained within. This label should show prominently the warning "Caution — Radioactive Materials."

23. The label should state the minimum distance from the source at which personnel may carry on normal work functions for a definite period of time. Observance of such specification on the label would prevent dangerous radiation exposure when the source is unshielded. The maximum time permissible for exposure within a few inches of this source should also be indicated. These limits will be such as to prevent more than the maximum permissible dose in any one week.

Operational Control

24. The shielding requirements for beta radiation are minimal because of its short range of penetration through solids. Since thin solid materials will stop all beta rays emitted by fission products, the major shielding is for the secondary X-rays produced by the beta particle bombardment of unshielded material.

25. To minimize the secondary X-rays, a double shield may be used, the inner or primary shield constructed of a material of low atomic weight such as plastic, and the outer jacket of a material of high atomic weight such as lead. Except for the orifice necessary for the useful beam, this shielding should be applied by the manufacturer of the sealed source. However, additional precautions may need to be taken in the industrial application to prevent

direct exposure to the useful beam.

26. Caution signs bearing the conventional purple radiation insignia should be conspicuously posted above the operating equipment. These signs should indicate the minimum allowable distance which should be maintained between an employee and a source area, and should list the names of personnel to be notified in case of a radiation emergency.

27. It is desirable to have the hazardous area set off with appropriately marked barriers as visual and physical reminders to personnel that it is dangerous.

28. All personnel connected with the installation and direct use of a beta ray sealed source should receive detailed instructions from qualified personnel as to safe and proper methods of handling the source in use, in storage, and during emergencies, such as fire, storm, flood, industrial accidents, or other irregular occurrences. Such personnel should also be familiar with proper methods of inspecting the source and of monitoring the source area.

29. A physical inspection of the installation should be made at least weekly by qualified personnel and, where physical changes are detected, a leak test should be carried out. The area may be monitored by suitable radiation survey instruments, such as the Geiger-Muller or ionization chamber types, to determine whether or not measurable or hazardous loss of the source has occurred. Another means of determining leakage is to wipe the surface of the source with appropriate kinds of filter paper and measure the wipers for radiation.

Decontamination

30. Decontamination is essentially a process of washing, cleaning, and safely disposing of radioactive "dirt" to render the contaminated area safe for habitation. The contaminants cannot be destroyed, but must be transferred to a place where they will do no harm while they are decaying.

31. Several methods of decontamination have been used. Scrubbing and washing down with a hose stream of uncontaminated water will carry away easily removable contamination.

32. Tenaciously adherent contaminants (grease and industrial grime) can sometimes be removed by scrubbing and scouring with steam, soap, or synthetic detergents and with dry cleaning solvents.

33. Deeply absorbed or surface reacted contaminants can be removed by chemical reagents which dissolve or form complexes with the contaminant (citric, pyrophosphoric, and hydrochloric acids and their sodium salts) or by removal of the contaminated surface (stripping paints with paint remover, planing wood, sandpapering, burning with a blow torch, or sandblasting).

34. If decontamination is impractical, there are several possible courses of action:

a. The area may be temporarily abandoned and isolated until the radiation intensity decreases by natural decay of the radioisotopes.

b. The contaminated surfaces may be sealed off with spray coatings of paints or plastics if the contaminants are alpha or beta ray emitters and there is relatively little secondary X-radiation.

c. Some contaminated articles may be disposed of by deep burial or by sinking in deep water in the ocean.

35. After decontamination, the wash water and rubble must be carefully disposed of either by deep burial in controlled areas so that it will not be dug up before it has decayed, or by isolation, or by sea disposal.

36. It generally is advisable to carry out the decontamination of large areas in two steps. The first step is a preliminary hosing down with plain water or water with an admixture of detergents, which will remove a considerable amount of the surface contamination and reduce the radiation level to make the second step safer. The second step is the more thorough, detailed cleanup, using a vigorous and complete scrubbing or chemical technique for removal of the surface, depending on the surface to be cleaned and on the contaminant.

37. Since personnel who decontaminate an area must necessarily come close to radioactive materials, they should be provided with suitable monitoring devices, such as pocket ionization chambers or film badges and, when necessary, with disposable clothing and respiratory protection.

Shipment of Sources

38. Radioactive materials must be shipped in strict accordance with the latest pertinent regulations of the Interstate Commerce Commission, the Post Office Department, or the Civil Aeronautics Administration, whichever is applicable.

Storage and Disposal of Sources

39. When not in active use, a sealed source should be stored in such a way as to prevent tampering or handling by unauthorized persons and to prevent any exposure of personnel exceeding the maximum permissible dosage levels. The storage container must be of such construction as to prevent the escape of radioactive materials. The container must be prominently marked, and secured in such a manner that only authorized persons can have access to the source.

40. Sources which require disposal because of leakage or damage or because they have served their useful life are best returned to the manufacturer. If they cannot be returned to the manufacturer, they may be disposed of in a manner approved by the Atomic Energy Commission or other appropriate governmental agencies.

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Handling Radioactive Waste in the Atomic Energy Program, The United

WISE TO CHOOSE - SAFE TO USE

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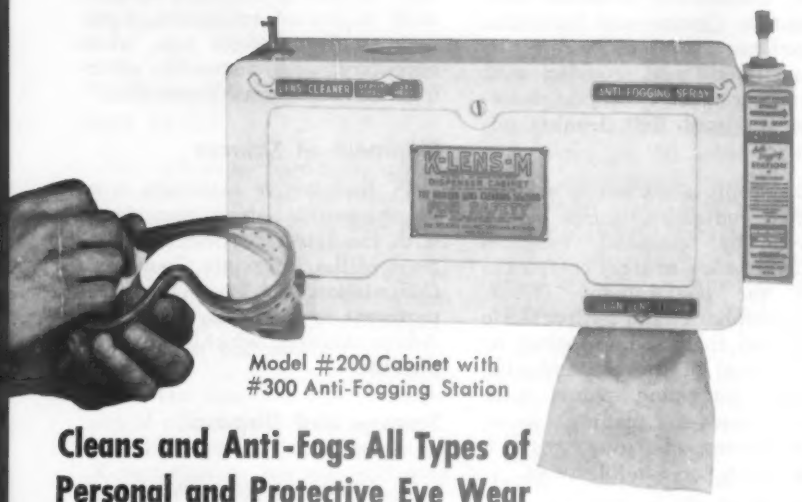

Model #200 Cabinet with
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Cleans and Anti-Fogs All Types of
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Effective - Economical
Easy to Install, Use and Service

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REG. U.S. & CAN. PAT. OFF.

Circle Item No. 9—Reader Service Card

States Atomic Energy Commission, Washington 25, D. C.

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Proposed Safety Code for the Preparation and Use of Beta Ray Sealed Sources for Industrial Applications, The Subcommittee on Sealed Beta Ray Sources, American Standards Association, New York, N. Y.

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ACKNOWLEDGMENT

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Noted Editor Heads NSC Church Committee

LOUIS B. SELTZER, editor of the *Cleveland Press*, has accepted the chairmanship of the National Safety Council's newly-created Church Safety Activities Committee.

The appointment combines two of the well-known newspaper editor's major interests—promoting safety and furthering civic cooperation between religious groups.

Mr. Seltzer has a broad background in working with leaders of all the religious denominations in the United States. He was national chairman of 1957 Brotherhood Week (reappointed for 1958), and is president of the Greater Cleveland Safety Council.

He was president of the city's Welfare Federation and its Convention Board, trustee of the YMCA, vice president of the Boy Scouts, and a leader in several hospital drives.

Louis B. Seltzer

In 1951, "Mr. Cleveland," as he is known, was given the top award of the National Conference of Christians and Jews. Previous award winners: Henry Ford II, Charles E. Wilson, Paul G. Hoffman.

Seltzer's first task as chairman of the Council committee is to appoint other members.

"The purpose of the committee is to develop and guide the National Safety Council's work with church leaders," said John T. Kenna, director of the Church Safety Activities Division of the Council.

"The committee will serve as a continuing agency for the development and maintenance of sustained interest in accident prevention programs by church groups.

"It will reflect the religious complexion of the United States, and, therefore, will include representatives of the various religious denominations, of special groups (parochial schools, for example), and of geographical sections. It will consist of lay as well as clerical leaders."

Announce Conference on Materials Handling

A NATIONAL conference on materials handling, the first to be sponsored by the American Society of Mechanical Engineers since 1949, has been announced by John C. Somers, chairman of the society's materials handling division and president of Industrial Products Engineering Company, Long Island City, N. Y.

The conference will be held in conjunction with the National Materials Handling Exposition, produced by Clapp & Poliak, Inc., New York, exposition management firm, at the Public Auditorium, Cleveland, Ohio, June 9-12, 1958.

"Few engineering problems which face management today are as important as materials handling," Mr. Sommers said. "Only 10 years ago it was virtually unknown as an important factor and some of the practices and equipment adopted became out-moded almost as soon as installed. We believe the ASME can provide the leadership for bringing about some balance in this field.

"The exposition will have one of the largest and most varied displays ever gathered of materials handling equipment. We have chosen to hold this conference concurrently with the show because these exhibits will provide an important practical background to the scientific discussions," Mr. Somers said.

Circle Item No. 10—Reader Service Card

Better Vision Products

The ALL NEW K-LENS-M SKYSCRAPER GOGGLE CLEANING STATION

Greatly reduces maintenance time—holds 1400 sheets of K-LENS-M Lens Tissue (7 boxes—200 sheets each, interfolded) and a full 16 oz. bottle of K-LENS-M Lens Cleaner. Mounts in space approximately 4½" wide by 28¼" high. Visual flow of tissue boxes tells at a glance when refills are needed. Model #200-G16

New squeeze bottle of K-LENS-M Lens Cleaner. Ideal for personal, desk or bench use. Unbreakable, attractive, refillable and appropriate for office or plant use.

K-LENS-M Lens Tissue in the new desk-size box. Convenient for office desks and work benches where a bottle of K-LENS-M Lens Cleaner is handy. The same as used in the K-LENS-M Skyscraper. Tissue is lint-free, interfolded to feed one at a time.

Send for Free Test Sample and complete information on your company letterhead.

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EACH MONTH the safety director meets with management to check on results and make future plans for the safety program. Left to right: A. W. Walsdorf, vice-president; William Fothe, plant superintendent and safety director; Willis A. Pellerin, chairman of the board; Norvin L. Pellerin, president. "Management must make the first safety move," says Willis Pellerin.

SAFETY IDEAS STAY SOLD

IN JULY 1954, the Pellerin-Milnor Corporation of New Orleans took a look at their accident record. To say that it didn't look good was a gross understatement.

The company, which manufactures stainless steel heavy duty laundry equipment, is located at Kenner, 11 miles up river from New Orleans. The modern one-story plant covers about 50,000 square feet of floor space.

Nine disabling injuries per hundred employees were reported during the last half of 1953 and the first six months of '54. For 1955, 1956, and so far in 1957, after a 50 per cent increase in the number of employees, there have been no lost-time cases.

Following is a step-by-step account of the measures taken to improve the plant's experience:

1. A safety committee was appointed. This included heads of seven departments, the president of the company and the chairman of the board of directors. The plant superintendent, William Fothe, took on the additional duties of safety director.

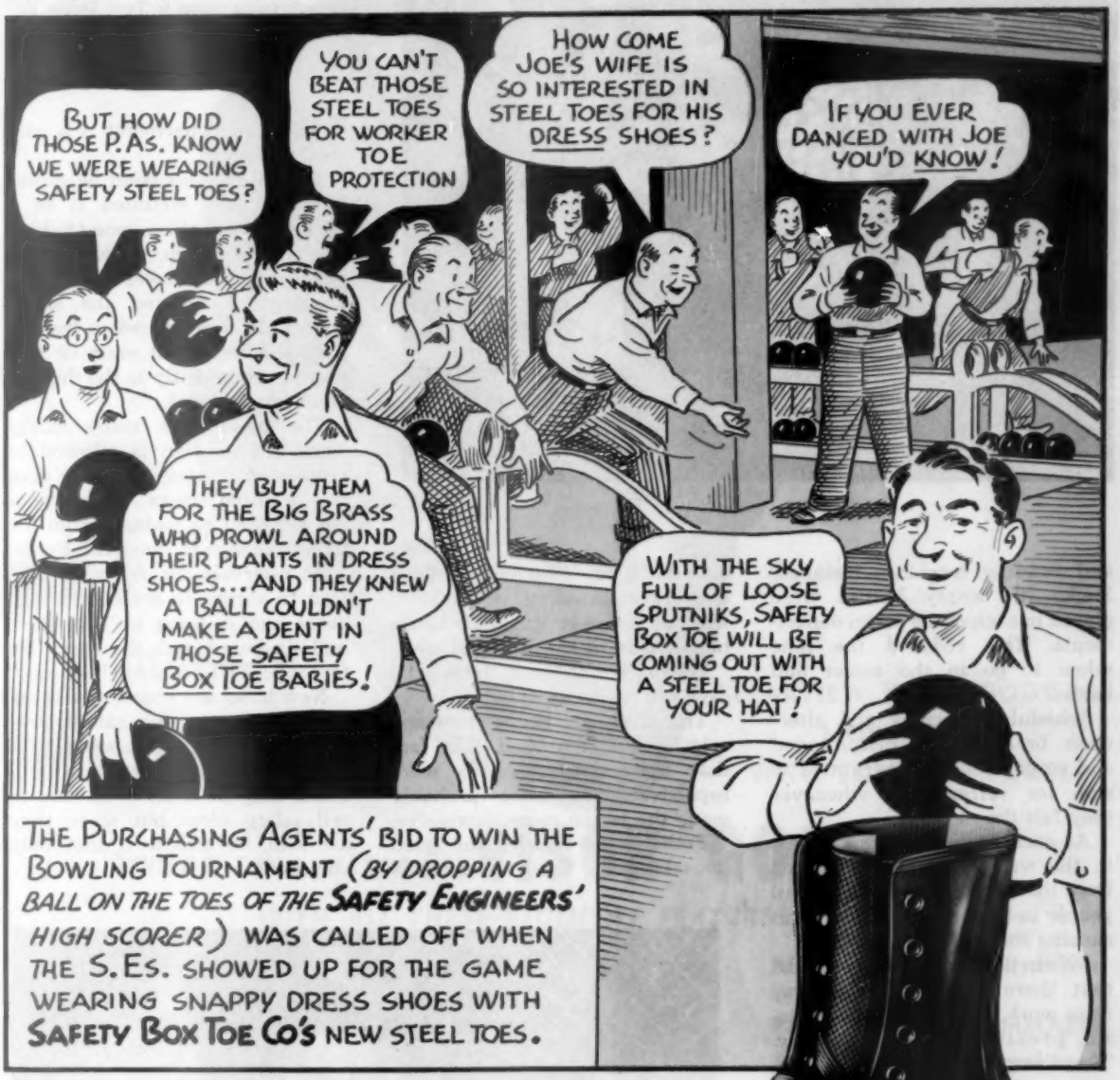
2. On the job studies brought schedules for safer procedures. Shields, guards and other protective devices were installed throughout the plant. All flow lanes were marked with wide yellow lines. Chains separate these lanes from the work areas.

"So far as the plant and equipment were concerned," said W. A. Pellerin, board chairman, "safety was made our number one business. It is our feeling that management must make the first safety move."

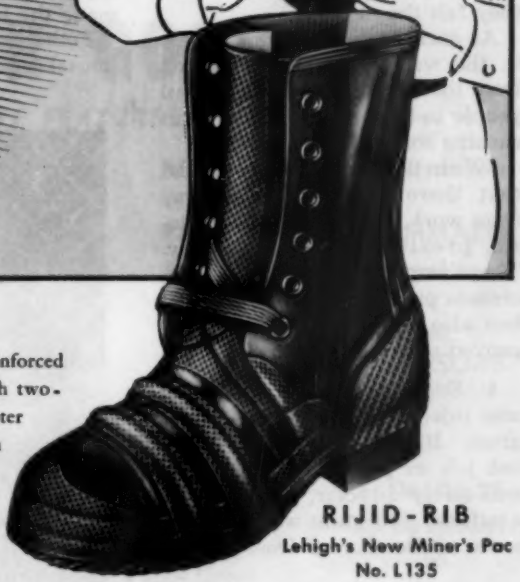
3. Prior to the middle of 1954, employees had a regular morning and afternoon break. There was one soft-drink cooler on the floor. After work studies, the safety committee recommended additional facilities for refreshment. Two additional cooler locations

FIRE PROTECTION is also a responsibility of the committee that supervises the accident prevention program. Bill Fothe (center) checks hose and extinguishing apparatus with Fire Chief Alfred Arnold, second from left, and members of the fire department.

SAFETY ENGINEERS PICK "SBT" STEEL TOES!


BUT HOW DID THOSE P. AS. KNOW WE WERE WEARING SAFETY STEEL TOES?
YOU CAN'T BEAT THOSE STEEL TOES FOR WORKER TOE PROTECTION
HOW COME JOE'S WIFE IS SO INTERESTED IN STEEL TOES FOR HIS DRESS SHOES?
IF YOU EVER DANCED WITH JOE YOU'D KNOW!
THEY BUY THEM FOR THE BIG BRASS WHO PROWL AROUND THEIR PLANTS IN DRESS SHOES... AND THEY KNEW A BALL COULDN'T MAKE A DENT IN THOSE SAFETY BOX TOE BABIES!
WITH THE SKY FULL OF LOOSE SPUTNIKS, SAFETY BOX TOE WILL BE COMING OUT WITH A STEEL TOE FOR YOUR HAT!

THE PURCHASING AGENTS' BID TO WIN THE BOWLING TOURNAMENT (*BY DROPPING A BALL ON THE TOES OF THE* **SAFETY ENGINEERS'** *HIGH SCORER*) WAS CALLED OFF WHEN THE S. ES. SHOWED UP FOR THE GAME WEARING SNAPPY DRESS SHOES WITH **SAFETY BOX TOE CO'S** NEW STEEL TOES.



Ten inch safety pac, black six eyelet blucher boot. Strongly reinforced at all points of wear and strain, for extra long life – built with two-rigid rubber ribs across the vamp, plus heavy rubber outside counter pocket around the heel, to offer improved foot protection from falling rocks and other objects. The boot also includes a steel shank and Lehigh's regular LockRim steel toe box, and is now available for immediate delivery from Lehigh's stock.

RIJID-RIB
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Write for our new illustrated booklet, *"A Progress Report of Industrial Foot Protection"*

Circle Item No. 11—Reader Service Card

HOUSEKEEPING is one of Bill Fothe's hobbies. Here he presents the rhinestone studded broom for the lowest housekeeping rating to Tony Delise, department head.

and vending machines installed. Racks for empty bottles were placed in each of the seven departments. This reduced the time taken to go to the cooler and back.

Scheduled morning and afternoon breaks were discontinued and employees were permitted to stop for refreshment whenever they felt the need.

At each cooler, either a recess in the wall or extra space back from the work flow allows several people to be at the cooler without causing congestion in the aisles.

"With the new plan we found that there was less time away from work," says Norvin L. Pellerin, president of the company. "Anything that lessens fatigue increases production. We believe it has also contributed to our improved safety record."

4. Some good-natured ribbing was injected into the safety program. Bill Fothe, in his two-hat job as plant superintendent, and safety director, proved to be a natural. One stunt was to secure some artificial eyes from a local manufacturer. Whenever he finds a worker grinding or welding without gogles or shield, he hands him a pair of the artificial eyes.

"Here, you'll need these," he says and walks away.

This stunt was neither new nor original but it worked. The fact that these artificial eyes were repulsively bloodshot probably made the lesson more impressive.

Fothe is a stickler for good housekeeping. "Nine times out of ten a clean department is a safe one," he says.

To put over his point he gilded a broom and mounted it in a silver-painted rhinestone-studded iron frame. Each week the department rated lowest in housekeeping is awarded the silver broom. It is presented to the department head and must be displayed prominently in the department for one week.

The plant uses many safety signs but no sign is allowed to remain on display for more than two or three weeks. "When people get used to seeing a sign it's time to change it," says Bill Fothe.

At intervals, an old work coat torn to shreds in accident a few years ago is hung on the plant bulletin board with the sign, "He forgot SAFETY was his business."

New ideas are constantly being introduced into the safety program. Some of them seem frivolous but they make sense. Bill Fothe may do a lot of ribbing to sell safety ideas but when they are sold, he sees to it that they stay sold.

BLOODSHOT artificial eyes remind an operator that he has forgotten eye protection. It's one of the oldest stunts in safety work but it's new to many a worker.

get modern eye protection

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MODEL No. 1
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WITH ALL THESE EXCLUSIVE FEATURES . . .

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- INCREASED impact strength
- NO FOGGING—no pitting
- NO GLARE, distortion or reflection
- NEAT — smart — modern appearance
- SAFELY NON-FLAMMABLE
- LIGHT WEIGHT—cool comfortable
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- ULTRA VIOLET ABSORBING LENSES

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CLEARVIEW #1	Clear Lens
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Circle Item No. 12—Reader Service Card

INDUSTRIAL HEALTH

Abstracts of current literature
on Occupational Hygiene, Medicine, and Nursing

By E. L. Alpaugh, *Industrial Hygienist, NSC*

Stress Dangers of Thallium Pesticides

THE USE OF thallium as a pesticide should be restricted to persons familiar with its hazards and trained in its handling, an American Medical Association committee has recommended.

Thallium sulfate, a heavy, white, water-soluble salt resembling table salt, is used for the control of rats, mice, ground squirrels, prairie dogs, moles, and insects such as ants and roaches.

The metal is extremely poisonous to all forms of life, according to a special report, prepared by the committee on pesticides of the A.M.A. Council on Drugs. The report, in the November 23 *A.M.A. Journal* was prompted by the occurrence—within six months—of more than 60 cases of thallium poisoning, including three deaths, in young children in Texas.

Thallium is one of the "more insidious poisons" because of the delayed and undistinguishing character of most of its symptoms and because of the difficulty in treating poisoning and preventing disabling after effects, according to Bernard E. Conley, Ph.D., Chicago, secretary of the committee.

The most common way in which thallium poisoning occurs is through eating pest baits containing the metal. It may also occur in industry and by eating accidentally contaminated foods. The chemical has a "notorious record" as a means for suicide or homicide. In Europe thallium is now claimed to be superseding arsenic as a murder weapon, the report said.

Unfortunately, effective baits containing thallium and other poisons for pest control are usually food products, which also attract children and pets. This factor is often aggravated by careless storage of attractive packages within reach of children.

The alarming rate of thallium poisoning in Texas and other places threatens to place the pesticidal use of thallium in the same disrepute as is its use as a drug and cosmetic, Dr. Conley said. It has been used as a depilatory and as a treatment for such diseases as syphilis and ringworm of the scalp.

The availability of effective and less toxic insecticides and rodenticides suggests that sanitation and the public welfare would not be harmed by discouraging the use of thallium as a household chemical, Dr. Conley said.

Symptoms of acute thallotoxicosis are variable, usually appearing in the gastrointestinal tract and nervous system. Loss of hair is the most familiar sign, the report said. Digestive disturbances include a metallic taste, salivation, nausea, vomiting, and abdominal pain. There may be puffiness of cheeks, eyelids, and lips, tingling and pain in the hands and feet, muscular weakness, delirium, convulsions, and coma.

"Had a real easy day at the plant, but that drive home on the freeway got me!"

Death may occur in a few days or be delayed several weeks. Recovery requires six or more months and there are frequent sensory and nervous system after effects.

The report said the recommendation that thallium be used only by experienced persons is "neither new nor novel." More than 30 years ago a similar recommendation was made in the *A.M.A. Journal* in a review of the hazards of thallium used in agriculture.

Healthier Than Average

COMPLETE HEALTH records on 100,000 present and retired employees, more than one third of which cover a period of 15 years or greater, are being studied by the Du Pont Medical Division. The uniqueness of the study is that a great majority of the medical facts concern people in good health, and Dr. Allan J. Fleming, director of the Medical Division, believes that answers to some vital health questions will result from the study.

A recently-completed four-year study by the Du Pont Medical Division disclosed that their employees are above the national average in general health. The death rate for Du Pont employees was only 68 per cent of the national norm. Deaths from heart attacks were 91 per cent of the national average; from cancers, 86 per cent, and from diabetes, 8 per cent. The study also indicated that hypertension is no greater among executives than among wage roll people.

Statistical studies will continue in various phases. There will be research on the prevalence of various acute illnesses, the development of diabetes among employees, and a study of the development of chronic disease.

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Circle Item No. 13—Reader Service Card

Fire-Resistant Hydraulic Fluids

Chemists have improved on nature and come up with products to keep hydraulic systems safe from fire

By W. D. MATTHEWS

MODERN industry is placing ever-increasing demands on the hydraulic systems which it is using in new methods of production. The introduction of servomechanisms, automated machinery, new materials of fabrication and more complicated manufacturing techniques have contributed to a steady rise in the development of hydraulically powered equipment. This advance in fluid power use has been matched with a corresponding advance in the technology of the hydraulic fluids designed for this equipment.

One of the most significant developments in this field has been the introduction of fire-resistant hydraulic fluids. In certain applications where there is a chance of exposure to ignition sources such as open flame, electric sparks, hot metal surfaces, etc., it is now possible to obtain a hydraulic medium which will resist ignition, and subsequent combustion, to a degree unobtainable with a standard petroleum oil.

At the same time, these fluids provide additional protection against the spread of fire which may have initiated at some other point in a plant, and for which a petroleum product would provide additional fuel. Naturally, fire hazard cannot be associated with the use of hydraulic equipment under most ordinary conditions, but where accidental exposure to some obvious ignition source is possible, the use of a fire-resistant fluid will certainly provide an additional measure of safety in the plant.

Four basic types of fire-resistant hydraulic fluids are available to industry today:

1. Straight phosphate ester fluid.
2. Phosphate ester based fluid.
3. Water and glycol mixtures.
4. Water and oil emulsions.

These must be individually examined according to how well they conform to each of the many standards for a suitable hydraulic fluid. Some standards might be:

Fire resistance
Lubricity
Ease of handling (toxicity, etc.)
Preparation necessary for installation
Effect on machinery
Effect on packings, seals, gaskets, etc.
Ability to reclaim and reuse
Stability
Cost.

The issue is further complicated by the fact that there are many other ways to evaluate these fluids. Only a careful study of each allows a satisfactory choice.

This article will confine itself to the straight phosphate ester fluids and an evaluation of their characteristics. These fluids are known as Cellulubes, made by the Chemical Division of Celanese Corporation of America. They are available in six controlled viscosities from 90 S.S.U. to 1,000 S.S.U. at 100 F. Thus there is a fluid with viscosity to match or closely approximate just about any grade of hydraulic oil now in use.

The viscosities of these fluids are not achieved by additives or thickeners, but rather by "molecular building" — actually constructing molecules of the same general classification which exhibit varying physical properties.

Chemically compounded fluids have a number of advantages, especially with regard to subsequent maintenance. The six

—*To page 74*

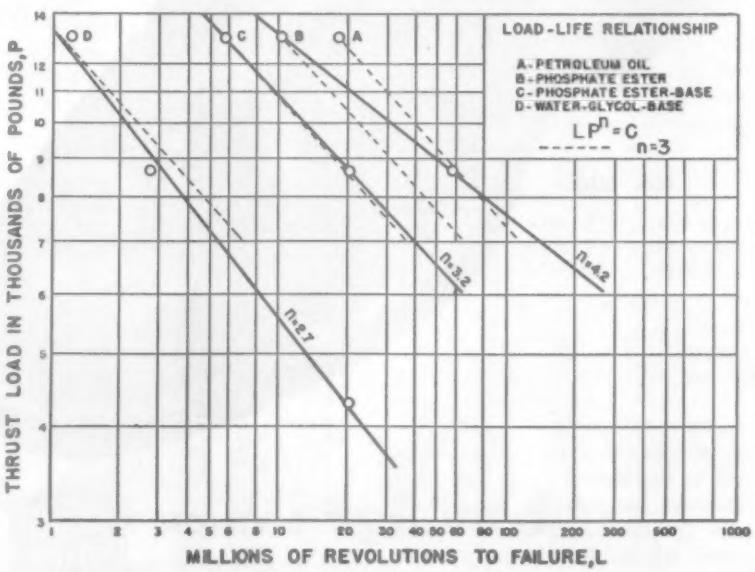

FIGURE 1. Differences in effects of fire-resistant hydraulic fluids on bearings.

W. D. MATTHEWS is with the Chemical Division, Celanese Corporation of America, New York. This article, which is condensed here, originally appeared in the April 1957 issue of *Precision Metal Molding*.

COPPUS BLOWER VENTILATORS

Used in wide variety of applications throughout industry

Improve workers' safety . . . health . . . comfort . . . efficiency

VANO DESIGN "A" VENTILATOR is used here during repairs to a chemical still. This type ventilator is used to ventilate tanks, tank cars, drums, vats, underground cable manholes, pipe galleries, airplane wing compartments, fuselages and other confined places. Uses 8" diameter flexible canvas tubing ("Ventube").

VANO DESIGN "B" VENTILATOR here discharges welding fumes from double-bottom compartment in naval vessel under construction. Large volume of air handled quickly expels fumes and results in good ventilation. Vano Design "B" can pass through opening only 14" in diameter. Uses 8" diameter flexible canvas tubing ("Ventube").

VANO DESIGN "C" VENTILATOR here withdraws fumes from a reactor kettle. This ventilator can be furnished with 8" suction inlet for 8" non-collapsible suction tubing — or multiple inlet nozzles for 5", 4", and 3" suction hose. The discharge may be connected to 8" "Ventube." Capacities furnished on request.

NO. 2 AEROPLANE HEAT KILLER here directs cool, fresh air on worker in drop forge plant. Heat killers restore workers' efficiency by providing extra ventilation in the hot months, or on any job where workers are continually or periodically required to work in excessive heat. Available in two types, three sizes in each.

VENTAIR DESIGN TE-4 VENTILATOR Gasoline Engine Driven, here delivers air into underground manhole. These ventilators provide fresh air to men in confined places, promoting safety, comfort, and increasing efficiency. Ideal where no electric current is available. Delivers 1700 CFM of fresh air. Uses 8" diameter flexible canvas tubing ("Ventube").

PORTAIR NO. 4 BLOWER EXHAUSTER exhausts fumes resulting from soldering, welding, tank coating, is also used in ventilating small tanks. It is designed to permit attachment of 4" flexible metal hose. Capacity: 425 CFM free air.

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Circle Item No. 14—Reader Service Card

OFF THE JOB

Safety programs for plant and community

BY HARRY C. JOHNSON

NSC Staff Representative, OTJ Safety Committee

Power Mower Victim Speaks

Last summer Dr. Bruce W. Bush of La Grange, Ill., suffered a partial toe amputation in a power mower accident. The following account of the incident, written by Dr. Bush, appeared originally in Q Note, *a publication of the Q Suburban Chapter of the Society for the Preservation and Encouragement of Barber Shop Quartet Singing in America (SPEBSQSA) under the title, "Who's Smart—or Pride Cometh Before a Fall."*

I know a guy who is a big shot. You don't have to prove it. Well, he decided that it was only the plebians that used the old push-type mowers on the lawn. So he bought a new rotary power mower and drove the neighbors crazy with noise.

One day he is watering fir trees and cutting the grass. You all know that it is poor taste to cut the water hose with the mower, so this guy pulls the mower back just in time and steps backwards. He is forgetting that there is a concrete something for the little birds to bathe in, just behind him.

Well, he falls backwards over this little concrete something, and in order to catch his balance, he pulls this grass-cutting, flesh-eating tool of the devil with him and feeds it his right foot.

Well, he lays there and watches it quickly eat up his toes, instep and start on the ankle. Then he says, "Boy, this is where you came in," and he pulls his old trusty 26 repeater and shoots it dead. So he stumps on the stump to the back porch, lustily screaming, "Dorothy, I've cut off my gorch—do something!"

So Dorothy arrives and says, "You knucklehead, that thing is for cutting grass—not feet." In due course the M.D. arrives and says, "Well, I'll bandage it and we'll take x-rays." This guy says, "What, my foot, Doc?" The M.D. says, "No, you nincompoop, your head."

So I know where some unfortunate barbershopper can cheaply buy a grass cutting, carnivorous, power rotarian lawn mower, but not "Q" Suburban because we need all our voices. So who is this dumbhead that figures his toes are clover blossoms? None other than Booming Bass Bush.

Observes O-T-J Safety Month

December was Off-the-Job Safety Month at Firestone Tire & Rubber Company, Akron, Ohio. Throughout the month, employees were reminded of home and traffic safety rules through personal contact with their supervisors and by a concentrated communication effort using plant publications, bulletin boards, reading racks, and payroll inserts.

In *Firestone Non-Skid*, an employee publication, J. E. Trainer, executive vice-president, urged the firm's thousands of employees across the United States to "take safety home with them."

OFF-THE-JOB safety month at Firestone was promoted by this display. It was designed and produced by Caesar Scarpitti (left) who is shown putting it up with the help of Safety Engineer C. E. Lynch.

"During 1955 and 1956, 40 employees were killed in off-job accidents in this country," he said. "Many were seriously injured in such accidents. Our workers have proved that they can be safe on the job. Now let's meet the challenge and be just as safe off the job."

Insurance Company Bulletins Point Out Off-Job Hazards

Many insurance companies provide a real service to their insureds by supplying helpful literature and other assistance with safety programs. Hartford Accident and Indemnity Company recently began a campaign to foster off-the-job safety among employees of firms whose group insurance it handles.

Last October, Hartford began distribution of a monthly *Health and Safety Hints* bulletin to some 2,500 policyholders. A letter explaining the new service pointed out the importance of off-the-job safety: "Employee alertness to off-job accident and health hazards keeps absenteeism down, improves operating efficiency, reduces your costs. It also heightens employee moral and well-being."

The two-page bulletin devotes space about 50-50 between safety subjects and general health information. Contents are keyed to seasonal events and related safety-health hazards. The initial issue, for instance, dealt at length with ways to prevent Halloween accidents to children and with Fire Prevention Month.

For additional employee coverage, companies are advised to post the bulletin on bulletin boards, incorporate hints in safety letters or bulletins, use the information in company magazines, and discuss the topics at safety meetings.

Health and Safety Hints is a joint project of Hartford's Accident and Sickness Insurance Department and the Engineering Department. Sample copies may be obtained without charge from Francis J. Giusti, Sales Promotion Department, Hartford 15, Conn.

New Thom McAn "Riggers" made for steel men may be just what your men need!

THOM MCAN says, "Safety First." But *comfort* is vitally important too!

Look at the safety shoes in the picture. They're the sort used by steel and oil well riggers, loggers, and many other heavy-duty workers. They're really *rugged* work boots. Stand up to anything.

But you'd be amazed how really *comfortable* they are. That's because they're made of specially processed cowhide. They are tanned for toughness, but they're *soft* as glove leather.

Here are *6* other important features of these Thom McAn safety shoes: 1. Choice of height—6″ or 8″. 2. Lace-to-toe fitting for whole foot comfort. 3. Extra large solid brass lace-holes for tough rawhide laces. 4. Water/oil-resistant storm welt. 5. Skid-resisting Neoprene sole and heel. 6. Leather-lined steel toecap.

Your men will feel safer, more comfortable, in these terrific safety shoes. And Thom McAn's thrifty prices are easy on paychecks too!

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SAFETY SHOES

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Circle Item No. 15—Reader Service Card

CONSULTATION CORNER

By L. C. Smith, *Industrial Department, NSC*

Got a problem in accident prevention or occupational hygiene? Questions are answered by mail, a few of general interest being selected for publication here

"Shop Air" for Air Line Respirators

Question. What is your recommendation on the use of "shop air" for respiratory devices? We have heard it should not be used.

Answer. We assume by "shop air" you are referring to the use of compressed air systems that are generally found in most shops and are used for grinding, drilling, and a variety of other processes.

Such systems when used for respirable air should contain a number of safeguards. Compressors, if they run hot, may produce dangerous amounts of carbon monoxide by decomposition of the lubricating oil in a hot compressor. To safeguard against this hazard, the compressor should be well maintained and must not run too hot. There should be a temperature regulator on the compressor.

To obtain clean air the compressor or blower intake must be

located where there are no sources of contamination such as motor exhausts, etc.

It is desirable to install a trap and filter in the compressor line ahead of the masks to separate oil, water, scale and other foreign material from the air stream. A pressure regulator should also be installed if the pressure in the compressor line exceeds 25 psi. Also, there should be a pressure release valve which will operate if the regulator fails.

As an additional guard, a carbon monoxide alarm may be installed in the air line.

Machining Uranium

Question. We are planning to do some work on uranium which will include machining operations on a lathe. What information do you have on the safe handling of uranium?

Answer. First, we assume you are going to work with normal uranium (99.3 per cent U238) or depleted uranium, neither of which emits highly penetrating radiation. However, uranium is pyrophoric. In other words, in finely divided form it often ignites spontaneously on contact with air and for this reason presents a problem when being machined.

Also, uranium's almost instantaneous work-hardening makes it difficult to machine. Fast, heavy cuts so the surface metal may be removed before it has a chance to work-harden seem to be the answer. Heavy, rigid, high-power machines and carbide tools give the best results.

If no coolant is used in machining uranium, fires may be expected in the chips or finely divided particles. If mineral oil coolants (high-flash point neutral mineral oils) are used liberally during machining operations, few fires will occur.

Fires in machining operations can be minimized by prompt removal of scrap out of the area where glowing turnings fall. If a small fire occurs, it can be controlled by graphite powder, powdered talc, or dry sand. Small fires can be extinguished by using a coolant; for this purpose, an open gallon can of the coolant should be kept close to the machining operations.

Uranium scrap should be stored under mineral oil or water. When stored under water, provisions must be made for the safe ventilation of the resultant hydrogen gas, since the scrap slowly oxidizes in contact with water and releases hydrogen. The storage of scrap only partially submerged in oil or water is dangerous, since the ignition is very likely to occur at the liquid line. Uranium scrap should never be allowed to accumulate in large quantities. Finely divided uranium is particularly pyrophoric.

Although depleted and normal uranium are not sources of penetrating gamma radiation, they are alpha and beta emitters. The machining operation must have adequate ventilation, such as a local exhaust system, so that the operator is not exposed to airborne concentrations of radioactive uranium particles exceeding 70 alpha disintegrations per minute per cubic meter of air.

To avoid exceeding the recommended beta dose to the hands of 1500-mrep per week, handling time should be restricted to about seven hours per week. Since polyethylene gloves used in machining operations and leather gloves used in inspecting and packing operations reduce the radiation some 30 to 35 per cent, the handling time can be extended to 10 hours.

This is actual handling time and the best way to determine this time is to make a time motion study. Only the time there is direct contact with the metal should be counted, since a foot of air acts as a shield.

Protective clothing, such as a good grade of cotton coverall is recommended. If laundry facilities are available at the plant site, the coveralls can be washed and

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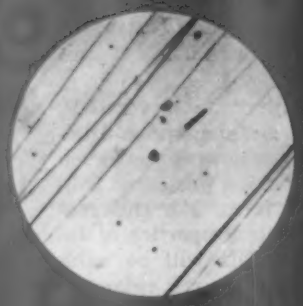
Circle Item No. 16—Reader Service Card ——→

SCRATCHED LENSES CAN CAUSE ACCIDENTS



Testing Laboratory

OBJECT: Wipe plastic safety shield lenses with silicone impregnated lens tissue and with Lensclean rayon lens tissue to determine if either or both tissues scratched the plastic surface.

RESULT: After both tissues had been used to wipe the plastic lenses the lenses were examined microscopically. Lens wiped with silicone tissue had by far more scratches.

CONCLUSION: The use of Lensclean rayon tissue reduces by a great extent the amount of marring or scratching of a plastic lens surface.

*Extract of a report from A Leading Independent Eastern Testing Laboratory

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Books, pamphlets and periodicals of interest to safety men

Compiled by Ruth Parks, Librarian, NSC

Hazardous Materials

Dangerous Properties of Industrial Materials, by N. Irving Sax. Reinhold Publishing Corp., 430 Park Ave., New York 22. 1957, revised edition, 1470 pages, $22.50.

THIS REVISION contains a greater variety of subject matter than the original work and is quite different in format. There are 12 sections, with the bulk of the material appearing in Section No. 10, which lists some 9,000 materials including the more common radio isotopes.

A brief desciption of each material is given along with other pertinent information such as fire hazard, constants, toxic hazard rating, etc. Extensive use is made of cross references for the compounds listed, although the large majority of references to ventilation control, personnel protection, personal hygiene, first aid, and storage and handling are general in nature.

Section 1, Toxicology, by Leonard Goldwater, M.D., Professor of Occupational Medicine, Columbia University, presents general background information useful for a better understanding of industrial toxicology with some explanation of the most commonly used laboratory tests and their significance.

William B. Harris, chief of the Industrial Hygiene Branch, Health and Safety Laboratory, U. S. Atomic Energy Commission, New York, contributed Sections 2, 3 and 4 on Ventilation Control, Personnel Protection and Personnel Hygiene, and Atmospheric Pollution respectively. These three sections are, of necessity, brief and concise.

The Ventilation Control Section lists 32 dust producing operations as related to the exhaust hood and exhaust requirements. There is also an excellent presentation of several of the basic concepts of exhaust hood design.

Section 5 on Radiation Hazards is by Dr. John Harley, chief of the Analytical Branch, Health and Safety Laboratory, U. S. Atomic Energy Commission, New York. It covers in some detail the basic principles of radioactivity and the problems associated with radiation. Somewhat related to this subject is the section on Reactor Safeguards by Dr. J. J. Fitzgerald, supervisor of Radiological Chemistry and Physics, Knolls Atomic Power Laboratory, General Electric Company, Schenectady, New York. Each section contains valuable material. However, some readers will find portions difficult to understand because of the complexity of the subject.

Milton S. Dunn, M.S., M.D., medical director, Rensselaer Division, General Analine and Film Corporation, Rensselaer, N. Y., discusses Allergic Disease in Industry in Section 9. This is written for the non-medical reader and indicates where industrial materials may act as causative factors.

Section 6, Industrial Fire Protection, and Section 7, Storage and Handling of Hazardous Materials, are by the author, consultant on industrial safety, Nuclear Development Corporation of America, White Plains, N. Y. These sections give basic information on fire protection and on safe storage and handling of eight general classes of hazardous materials—explosives, flammable materials, oxidizing agents, water sensitive fire and explosion hazards, fire and explosion acid and acid fume-sensitive materials, compressed gases, toxic hazards, and corrosive materials.

Section 11 contains shipping regulations as published by the Interstate Commerce Commission and Section 12 is an index to synonyms.

The subject matter covered in this volume is extensive and because of such wide coverage much of the information presented is in a condensed form. For this reason, *Dangerous Properties of Industrial Materials* will be valuable as an initial quick reference for use in conjunction with other references.

E. L. ALPAUGH

BOOKS AND PAMPHLETS

Mines

Full-Shift Dust Exposure in Some Bituminous-Coal Mines. U. S. Bureau of Mines, Publications Distribution Section, 4800 Forbes St., Pittsburgh 13, Pa. 10p. 1957 Report of Investigation 5361.

Recommended Safety Standards for Shaft Sinking. U. S. Bureau of Mines, Publications Distribution Section, 4800 Forbes St., Pittsburgh 13, Pa. 1957. 21p. Information Circular 7810.

Report of Bureau of Mines Research and Technologic Work on Coal and Related Investigations, 1955. U. S. Bureau of Mines, Publications Distribution Section, 4800 Forbes St., Pittsburgh 13, Pa. 103p. 1957 Information Circular 7794.

MAGAZINE ARTICLES

Absenteeism

"Absence and the Physical Conditions of Work." R. D. Shepherd and J. Walker. *British Journal of Industrial Medicine.* Oct. 1957. p. 266-274.

Atmospheric Pollution

"Determination and Measurement of Particles in City Atmospheres." Morris B. Jacobs and others. *American Journal of Public Health,* Nov. 1947. p. 1430-1433.

Burns

"Dry Aluminum Powder Therapy for Thermal Burns." Marvin D. Maxmen. *A.M.A. Archives of Industrial Health.* Nov. 1957. p. 414-415.

"The Exposure Method in the Treatment of Burns." George T. Van Petten. *A.M.A. Archives of Industrial Health.* Nov. 1957. p. 416-421.

"Oral Treatment of Burn Shock." Kehl Markley. *A.M.A. Archives of Industrial Health.* Nov. 1957. p. 427-434.

"The Treatment of Burns." Robert D. Pillsbury. *A.M.A. Archives of*

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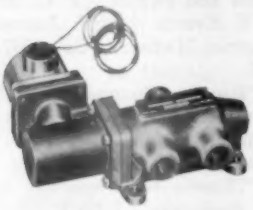

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Industrial Health. Nov. 1957. p. 422-426.

Chemical Industry

"How Victor Chemicals' Safety Program Reduces Accidents, Cuts Costs." *Engineering and Mining Journal.* Nov. 1957. p. 116-117.

Clothing

"Ventilation of Impermeable Clothing." G. S. Christie and others. *British Journal of Industrial Medicine.* Oct. 1957. p. 258-265.

Disaster Plans

"How to Beat the Next Flood." *Factory Management and Maintenance.* Nov. 1957. p. 102-107.

Dust

"Experimental Studies on the Relative Importance of Concentration and Duration of Exposure to Dust Inhalation." B. M. Wright. *British Journal of Industrial Medicine.* Oct. 1957. p. 219-228.

Garages

"Air Pollution in Diesel Bus Garages." B. T. Commins and others. *British Journal of Industrial Medicine.* Oct. 1957. p. 232-245.

Health

"Acute Decompression Illness." Samuel I. Kooperstein. *Industrial Medicine and Surgery.* Nov. 1957. p. 492-496.

"Chemical and Historical Post-Mortem Studies on a Workman Exposed for Many Years to Cadmium Oxide Fumes." J. C. Smith and others. *British Journal of Industrial Medicine.* Oct. 1957. p. 246-249.

"Gas-Mask Protection Against Diborane, Pentaborane, and Mixtures of Boranes." James E. Long and others. *A.M.A. Archives of Industrial Health.* Nov. 1957. p. 393-402.

"Observations on Urinary Cadmium and Protein Excretions in Men Exposed to Cadmium Oxide Dust and Fumes." J. C. Smith and J. E. Kench. *British Journal of Industrial Medicine.* Oct. 1957. p. 240-245.

"Recent Changes in Maximum Permissible Exposure Values." K. Z. Morgan. *A.M.A. Archives of Industrial Health.* Nov. 1957. p. 357-362.

"There's No Immunity to Death by Asphyxia." John B. Dunne. *Supervision.* Nov. 1957. p. 18-20.

Hearing

"Single Frequency Screening Technique—A Test of Its Validity." R. A. Merklein. *Industrial Medicine and Surgery.* Nov. 1957. p. 497-498.

Organization

"How to Put 100 per cent of Your Effort Behind Safety . . . Six Steps to a New Safety Peak." H. B. Duffus and G. R. Orth. *Factory Management and Maintenance.* Nov. 1957. p. 96-99.

Textile Industry

"An Investigation into the Acute Respiratory Reaction to the Inhalation of Tamarind Seed Preparations." Peter G. Tuffnell and I. Dingwall-Fordyce. *British Journal of Industrial Medicine.* Oct. 1957. p. 250-252.

ADDRESSES OF MAGAZINES MENTIONED

Readers are asked to send their requests for copies of magazine articles to the publishers, rather than to the NSC Library, which is unable to fill such orders.

A.M.A. Archives of Industrial Health, American Medical Assn., 535 N. Dearborn St., Chicago 10.

American Journal of Public Health, American Public Health Assn., 1790 Broadway, New York 19.

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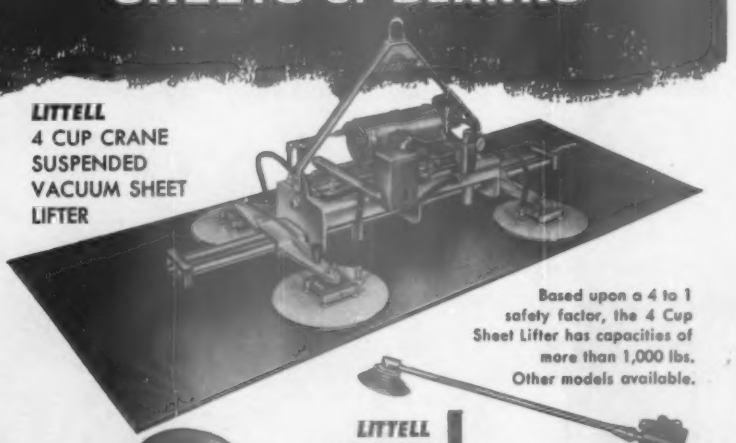

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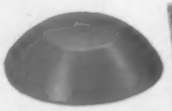

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Engineering and Mining Journal, McGraw-Hill Publishing Co., 330 W. 42nd St., New York 36.

British Journal of Industrial Medicine, British Medical Association House, Tavistock Square, London, W. C. 1, England.

Factory Management and Maintenance, McGraw-Hill Publishing Co., 330 W. 42nd St., New York 36.

Industrial Medicine and Surgery, 605 N. Michigan Ave., Chicago 11.

Supervision, 404 N. Wesley Ave., Mount Morris, Ill.

COMING EVENTS

in the safety field

Jan. 30-31, Milwaukee
Sixteenth Annual Mid-Winter Safety Conference and Exhibition (Hotel Schroder). R. W. Gillette, executive director, Wisconsin Council of Safety, 1 W. Wilson St., Madison 2, Wis.

Feb. 6-7, San Francisco
Eighth Annual California Statewide Meeting of the Governor's Industrial Safety Conference (Fairmont Hotel). A. C. Blackman, chief, Division of Industrial Safety, California Department of Industrial Relations, 910 Mission St., San Francisco 3.

Mar. 2-4, Memphis, Tenn.
Southern Safety Conference and Exposition, (Peabody Hotel). W. L. Groth, executive director, Southern Safety Conference, Inc., P. O. Box 8927, Richmond 25, Va.

Mar. 4-5, Boise, Idaho
Idaho Governor's Safety Conference (Hotel Boise), Boise, Idaho.

Mar. 5-6, Philadelphia
Annual Regional Safety and Fire Conference and Exhibit of the Philadelphia Safety Council (Bellevue-Stratford Hotel). Harry H. Verdier, executive director, Philadelphia Safety Council, Chamber of Commerce Bldg., 121 S. Broad St., Philadelphia 7.

Mar. 16-19, Dallas, Tex.
Nineteenth Annual Texas Safety Conference (Adolphus Hotel). J. O. Musick, general manager, Texas Safety Association, Inc., 830 Littlefield Bldg. Austin, Tex.

Mar. 17-18, Boston
Thirty-seventh Annual Massachusetts Safety Conference and Exhibit (Hotel

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R-58

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Statler). Bert R. Harmon, assistant manager, Massachusetts Safety Council, 31 State St., Boston 9.

Mar. 17-19, Los Angeles
Fifth Annual Western Safety Congress and Exhibits. Joseph M. Kaplan, manager, Greater Los Angeles Chapter, National Safety Council, 3388 W. 8th St., Los Angeles 5.

Mar. 18-19, Fort Wayne, Ind.
Northeastern Indiana Safety Conference and Exhibit. Ivan A. Martin, manager, Safety Council, Chamber of Commerce of Fort Wayne, Fort Wayne, Ind.

Mar. 25-27, Pittsburgh, Pa.
Thirty-third Annual Western Pennsylvania Safety Engineering Conference and Exhibit (Penn-Sheraton Hotel). Harry H. Brainerd, executive manager, Western Pennsylvania Safety Council, Inc., 605 Park Bldg., Pittsburgh 22, Pa.

Apr. 9-11, Gainesville, Fla.
Fifth Annual Conference on Accident Prevention Engineering (University of Florida). Donald B. Wilcox, conference coordinator, Department of Industrial Engineering, University of Florida, Gainesville, Fla.

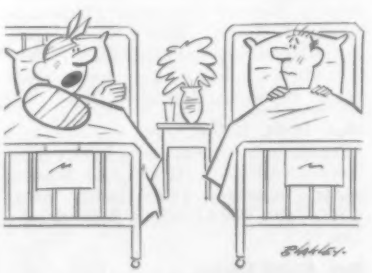
Apr. 14-18, New York
Twenty-eighth Annual Safety Convention and Exposition of the Greater New York Safety Council (Hotel Statler). Paul F. Stricker, executive vice-president, 60 E. 42nd St., New York 17.

Apr. 15-17, Detroit, Mich.
Twenty-eighth Annual Michigan Safety Conference (Sheraton Cadillac Hotel). Ben Duguid, executive secretary, 16130 Northland Dr., Detroit 35, Mich.

Apr. 16-17, Indianapolis, Ind.
Eleventh Central Indiana Safety Conference and Exhibit. (Claypool Hotel). Jack E. Gunnell, director, Indianapolis Safety Council, Chamber of Commerce, Indianapolis, Ind.

Apr. 21-22, Toronto, Ont.
Annual Conference of the Industrial Accident Prevention Associations (Queen Elizabeth Bldg., Canadian National Exhibition). R. G. D. Anderson, general manager, IAPA, 90 Harbour St., Toronto 1, Ont.

Apr. 22-24, Columbus, Ohio
Twenty-eighth All-Ohio Safety Con-



"I had my car in 'drive' and my mind at 'idle.'"

gress and Exhibit (Deshler-Hilton Hotel). Arthur W. Moon, congress manager, Room 611, Ohio Dept. Bldg., Columbus 15, Ohio.

May 1-3, Richmond, Va.
Annual Conference of Virginia Safety Association (Monticello Hotel). James T. Wadkins, manager, 2501 Monument Ave., Richmond, Va.

May 5-7, Allentown, Bethlehem, Easton, Pa.
Thirty-first Eastern Pennsylvania Safety Conference. Harold E. Seward, Lehigh Valley Safety Council, 602 E. 3rd St., Bethlehem, Pa.

May 6-8, Buffalo, N.Y.
Eighteenth Western New York Safety Conference and Exhibit (Hotel Statler). Clifford H. Seymour, executive secretary, P.O. Box 315, Niagara Falls, N. Y.

May 8-9, Baltimore, Md.
Governor's Annual Safety-Health Conference and Exhibit (Lord Baltimore Hotel). Joseph A. Haller, executive chairman, Department of Labor and Industry, 12 E. Mulberry St., Baltimore 2, Md.

May 14-16, Asheville, N. C.
Twenty-eighth Annual, North Carolina Statewide Industrial Safety Conference (Battery Park Hotel). H. S. Baucom, director of safety, North Carolina Industrial Commission, Raleigh, N. C.

May 20-21, Louisville, Ky.
Kentuckiana Safety Conference and Exhibit, (Kentucky Hotel). Estel Hack, executive vice-president, Louisville Safety Council, 214 Speed Bldg., Louisville 2, Ky.

June 9-12, Cleveland, Ohio
Eighth National Materials Handling Exposition (Public Auditorium). Clapp & Pollak, Inc., Exposition Management, 341 Madison Ave., New York.

June 11-12, Bridgeport, Conn.
Thirteenth Annual Connecticut Safety Conference (Stratfield Hotel). Sponsored by the Connecticut Council, A. V. Short, publicity director, 15 King St., Wallingford, Conn.

Sept. 18-19, Rockland, Maine
Thirty-first Annual Maine State Safety Conference (Samoset Hotel). Arthur F. Minchin, secretary, Department of Labor and Industry, State House, Augusta, Maine.

Oct. 20-24, Chicago
Forty-sixth National Safety Congress and Exposition (Conrad Hilton Hotel). R. L. Forney, secretary, National Safety Council, 425 N. Michigan Ave., Chicago 11.

The girl who thinks no man is good enough for her may be right —also, she may be left.

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Circle Item No. 21—Reader Service Card

SMALL BUSINESS and ASSOCIATIONS

By A. M. Baltzer and John T. Curry
Small Business Program Staff, National Safety Council

Heads New Committee

Clyde F. Schlueter, accident prevention manager for Employers Mutuals of Wausau, Wis., accepted the chairmanship of the Small Business and Associations Committee of the National Safety Council's Industrial Conference.

Mr. Schlueter has been associated with the Accident Prevention Department of Employers Mutuals for 25 years. He is a graduate electrical engineer, and is past chairman and a member of the executive committee of the Council's Electrical Equipment Section.

He has been very active in the development of the Wisconsin Council of Safety's recently expanded program, and is currently vice-president for traffic safety. He also served on the Governor's Committee on Traffic Safety for Wisconsin.

Nationally, Mr. Schlueter is well known. He is chairman of the Safety Standards Committee of the American Society of Safety Engineers; he represents the National Association of Mutual Casualty Companies on the National Committee on Films for Safety and he is assisting on the President's Conference on Occupational Safety (March 1958).

Clyde F. Schlueter

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DOUBLE FIVE TIMES
How Do You Stand?

HARRY E. KORAB, technical service director, American Bottlers of Carbonated Beverages (left), and John T. Curry, associations safety consultant, NSC, discuss the industry's accident losses at annual convention.

Committee Strengthened For 1958

The Small Business and Associations Committee has always been one of the most active committees of the Council's Industrial Conference, but even more is expected of it this year. The Committee has been strengthened in several ways.

Hats off to Miss Marion E. Martin, our first representative of the fair sex. Miss Martin, the Council's vice-president for women's activities, is also well-known for her interest in occupational safety, particularly in conferences for smaller firms in Maine.

Another first—the two section chairmen give us additional representation from industries with a high percentage of small firms. This should enable us to strengthen our liaison between the sections and associations within them.

Our geographical spread is broader. It now includes associations and local representatives from the West Coast where so many small firms are springing up, and our friendly neighbor to the north continues to provide active help too.

Through service on the committee, the National Association of Manufacturers and Chamber of Commerce of the U. S. now officially join our program, although they have assisted in many other ways in the past. Their advice and support will be invaluable.

Last, but not least, our work with high hazard industries is supported by the addition of association executives familiar with the problem. The continued service of some of our most active, former key members, rounds out

—Turn page

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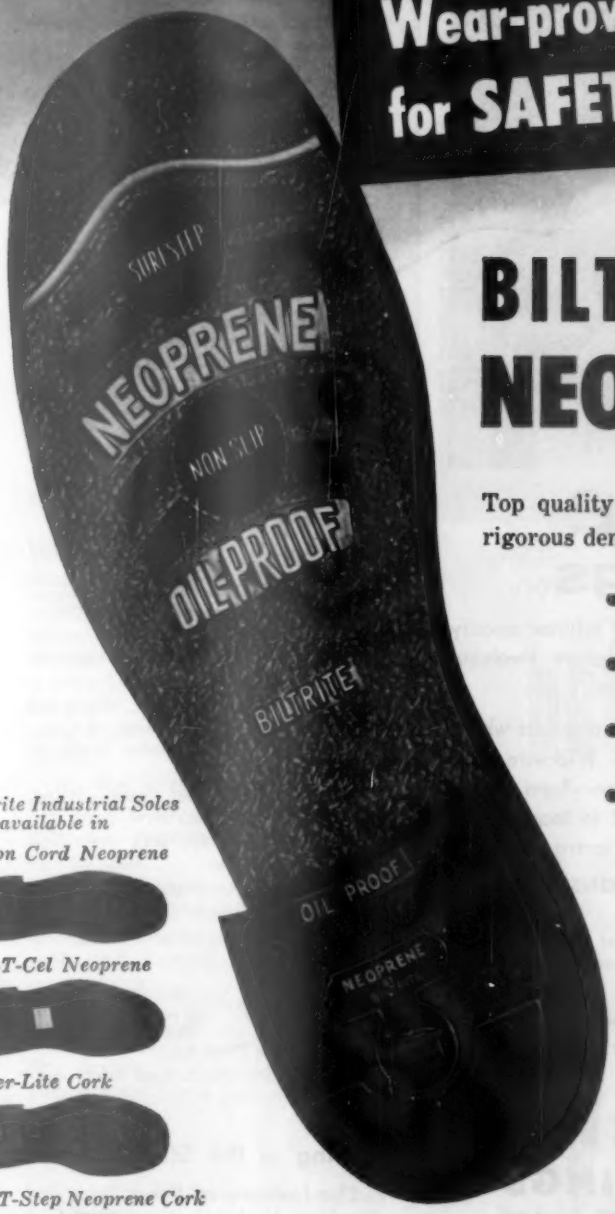

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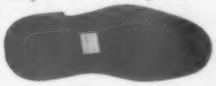

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a committee which promises even greater accomplishments in 1958.

Small Business and Associations Committee, NSC, 1957-58

CLYDE SCHLUETER (chairman) Nat'l. Assn. of Mutual Casualty Cos. and acc. prev. mgr., Employees Mutuals of Wausau, Wausau, Wis.

DAN ADAIR, coord. of safety activities, Pacific Coast Assn. of Pulp and Paper Mfrs., Portland, Ore.

W. C. BARBER, sr. saf. engr., Standard Accident Insurance Co., Detroit 32, Mich. (Chairman, Automotive & Mach. Shop Section).

ROGER J. BEAR saf. dir., The Kroger Co., Cincinnati, Ohio. (Chairman, Trades & Service Section)

JOHN F. BIEHL, secy.-treas., Jabez Burns & Sons, Inc., New York.

WM. M. CALDWELL, asst. secy., Gray Iron Founders' Society Inc., Cleveland, Ohio.

JOHN M. CONVERY, Ind. Relations Divn., National Assn. of Mfrs., New York.

FREDERICK H. DEEG, saf. engr., Nat'l. Assn. of Mutual Casualty Cos., Chicago.

ROBERT HAGOPIAN, asst. mgr., Accident Prevention Dept., Assn. of Casualty and Surety Cos., New York.

JOSEPH M. KAPLAN, secy.-mgr., Greater Los Angeles Safety Council, Los Angeles.

IVAN F. LE GORE, saf. dir., Portland Cement Assn., Chicago.

MISS MARION E. MARTIN, commissioner, Labor and Industry, Augusta, Maine.

T. H. MILLER, joint mgr., Industrial Accident Prevention Assn.—Quebec Montreal, Canada.

CHARLES M. MORTENSEN, mgr., Trade and Prof. Assn. Dept., Chamber of Commerce of the United States, Washington 6, D. C.

RAUEL N. PAPICH, saf. consultant, American Gas Assn., New York.

H. F. REINHARD, secy., Int'l. Acetylene Assn., New York.

JOHN H. SEETON, secy., Pennsylvania Mfrs. Assn., Philadelphia.

HENRY TOENNIES, development engineer, Nat'l. Concrete Masonry Assn., Chicago.

Staff Representatives:

A. M. BALTZER, dir., Small Business and Associations Program.

JOHN T. CURRY, associations safety consultant.

Getting in the Scrap

The Institute of Scrap Iron and Steel is backing the attack on traffic accidents by sending a very effective two-page "Management Brief" bulletin to its 1,500 members. We particularly like the

specific suggestions the *Institute* offers to members — suggestions geared to small scrap yard operations which include an occasional truck or two.

Many associations have more acute fleet-public liability problems, a fact which reflects even greater credit to the *Institute*. Its bulletin admonishes members to consider the "looks" of their trucks so that the trucks can be distinguished from the scrap they haul! This is plain talk that makes sense to businessmen with even the slightest perception of good public relations.

Atom Power Lab Wins AEC Award

THE KNOLLS Atomic Power Laboratory, operated by the General Electric Company at Schenectady, N. Y., for the Atomic Energy Commission, has been awarded the AEC's top safety award for completing more than 3 million man-hours of work during 1956 and 1957 without a disabling injury.

The AEC Award of Honor was presented by Jon D. Anderson, manager of the AEC's Schenectady operations office, to Frederick E. Crever, KAPL general manager. KAPL earlier was awarded the National Safety Council "Green Cross" safety award and the A E C "Award of Merit."

In the entire history of the laboratory, no KAPL employee ever has received an injury due to radiation.

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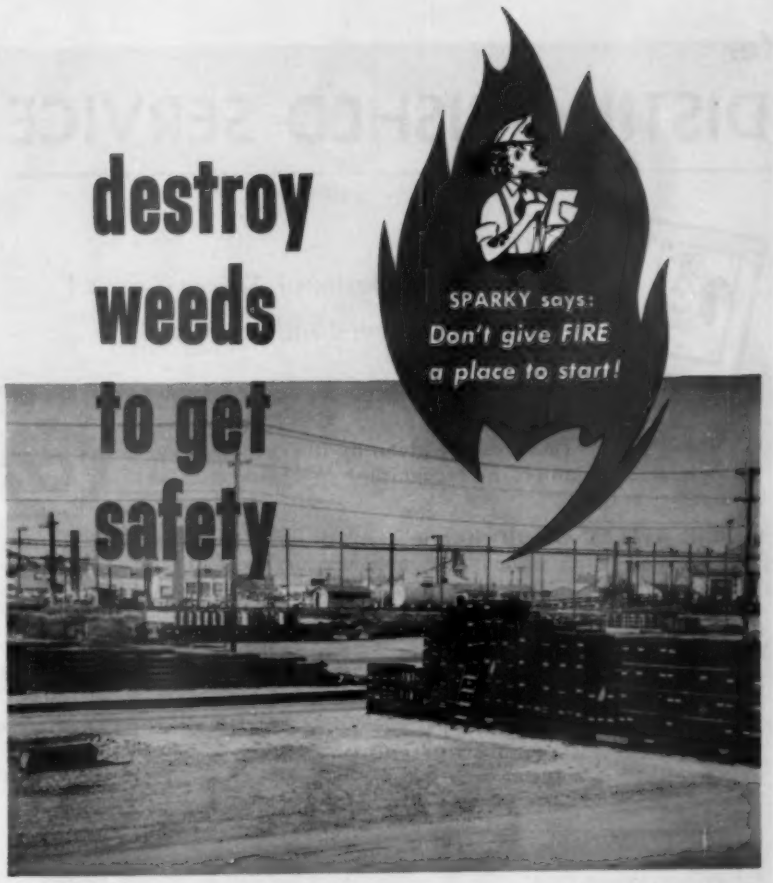

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2. **THE AWARD OF MERIT** has similar, but less exacting requirements. Minimum number of injury-free man-hours needed to qualify is 1,000,000.

3. **THE CERTIFICATE OF COMMENDATION** is available only for injury-free records covering a period of one or more full calendar years and totaling 200,000 to 1,000,000 man-hours.

4. **THE PRESIDENT'S LETTER** is available for injury-free records covering a period of one or more full calendar years and totaling less than 200,000 man-hours.

Details of eligibility requirements may be obtained by writing to the Statistics Division, National Safety Council.

AWARD OF HONOR

Burroughs Corp. Two awards: Detroit Plant, Detroit Div.

Columbia-Geneva Steel Div., U.S. Steel Corp., Torrance (Calif.) Works.

General Electric Co., Euclid Lamp Plant No. 342, Cleveland, Ohio.

Hughes Aircraft Co., El Segundo, Calif.

Humble Oil & Refining Co., Houston, Tex. Entire company.

J. A. Jones Construction Co., AEC Hanford Operations Office, Richland, Wash.

Lockheed Aircraft Corp., Georgia Div., Marietta, Ga.

Milan Arsenal, Milan, Tenn.

National Biscuit Co., Pittsburgh (Pa.) Cracker Bakery.

Radio Corp. of America, Cincinnati (Ohio) Plant.

Southern Natural Gas Co., Birmingham, Ala. Entire company.

Western Electric Co., Inc. Two Awards: Hawthorne Works, Chicago; San Francisco Distributing House.

AWARD OF MERIT

American Can Co. Two Awards: Fairport (N.Y.) Plant, Geneva (N.Y.) Machine Shop.

American Smelting & Refining Co., Garfield Plant, Magna, Utah.

Amerotron Co., Williamston (N.C.) Rayon Plant.

C. Brewer & Co., Ltd., Kilauea Sugar Co., Ltd., Kilauea, Kaua, Hawaii.

Caterpillar Tractor Co. Four Awards: Peoria Plant, General Office, Morton Parts Dept., Engine Factory (all in Peoria, Ill.).

Chrysler Corp., Nine Mile Press Plant, Stamping Div.

Continental Can Co. of Canada, Ltd., Plant 59, St. Laurent, Que.

Ford Motor Co. Seven Awards: Chicago Stamping Plant; Cleveland (Ohio) Stamping Plant; Dearborn (Mich.) Specialty Foundry; Trim Plant, Highland Park, Mich,; Long Beach (Calif.) Assembly Plant; Sterling Plant, Sterling Twp., Mich,; Construction and Property Services, Dearborn, Mich.

B. F. Goodrich Industrial Products Co., Plant No. 4, Akron, Ohio.

H. M. Harper Co., Morton Grove, Ill. Entire company.

Industrial Rayon Corp., Painesville (Ohio) Plant.

International Harvester Co. Three Awards: Manufacturing Research, Chicago; Milwaukee Works; Farmall Works, Rock Island, Ill.

Kaiser Aluminum & Chemical Corp. Trentwood Works, Spokane, Wash.

Kennecott Copper Corp., Bingham Mine, Bingham Canyon, Utah.

Kentucky Utilities Co., Lexington, Ky. Entire company.

National Biscuit Co., Shredded Wheat Bakery, Niagara Falls, N. Y.

National Lead Co. of Ohio, Feed Materials Production Center, Fernald, Ohio.

Nekoosa-Edwards Paper Co., Port Edwards (Wis.) Mill.

North American Aviation, Inc., Missile Development Div., Downey, Calif.

Pacific Power & Light Co., Portland, Ore. Entire company.

Radio Corp. of America, Telecommunications Div., Detroit (Mich.) Plant.

Sears, Roebuck & Co., David Bradley Mfg. Works, Bradley, Ill.

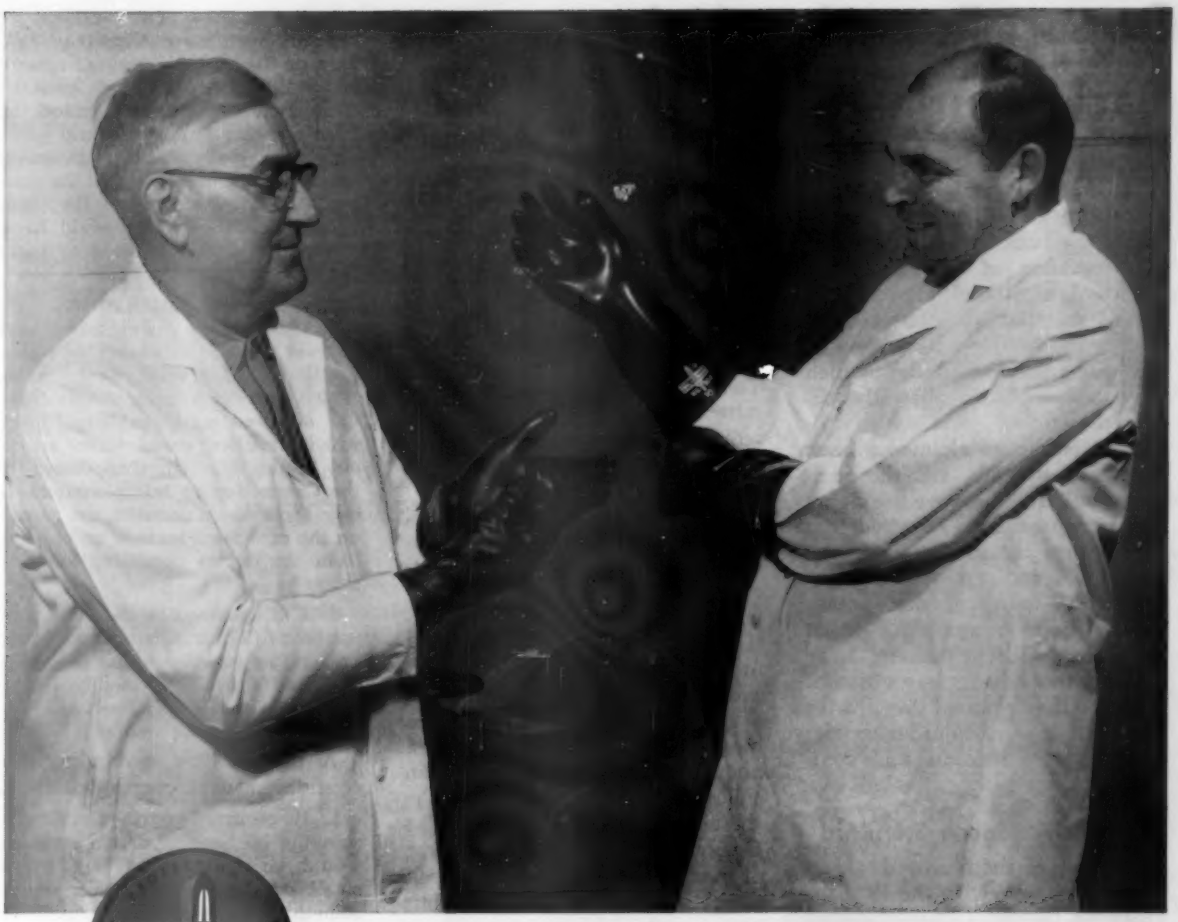
Solar Aircraft Co., Des Moines (Iowa) Plant.

U.S. Rubber Co. Two Awards: Naugatuck Chemical Div., Painesville (Ohio) Plant; Indianapolis (Ind.) Plant.

U.S. Steel Corp., Pittsburg (Calif.) Works.

Western Electric Co., Inc. Two Awards: Nashville (Tenn.) Distributing House; Chicago Area, Telephone Sales Div.-Install.

There are three kinds of people: those who make things happen, those who watch things happen, and those who have no idea what has happened.



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Report Puts New Light on Back Injuries Standard

THE MOST controversial disability in injury reporting today is the back injury. Until the 1954 revision of the American Standard, most back ailments reported on the job were considered work injuries, regardless of the circumstances under which they occurred, or allegedly occurred.

If an employee claimed a back injury on the job, and the company could not disprove the claim, standard procedure required that the injury be included in the company's injury record. Undoubtedly, many of these cases merely became symptomatic at work and the persons either thought the injuries arose out of work, or they claimed the injuries arose out of work in order to take advantage of medical and compensation benefits.

Present American Standard

Because of these situations, an attempt was made in the 1954 revision of the American Standard to provide an objective plan to help separate non-work back injuries from work injuries.

The wording of the present American Standard on back injuries is as follows:

"A back injury or strain shall be considered a work injury only if it meets all of the following conditions:

(a) There is a clear record of an accident or an incident, such as a slip, trip or fall, sudden effort, or overexertion, or blow on the back.

(b) The physician authorized to treat the case is satisfied, after a complete review of the circumstances of the accident or incident, that the injury could have arisen out of said accident or incident.

A back condition which is revealed while an employee is performing his normal, regular duties, but which neither results from nor is caused by an accident or incident, shall not be considered a work injury."

Cases Referred to Committee

In the two years during which the section on back injuries has been included in the Standard, about 40 cases have been referred to the Committee on Interpretations for review and decision. These cases reported to the Committee have provided information which now permits a somewhat more precise basis for interpreting the Standard.

Many of the cases occurred when workers slipped, fell, twisted themselves, over-reached, lifted improperly, awkwardly, or while in cramped or stooped positions. In all such cases, the Committee has interpreted the Standard as indicating reportability.

The difficult cases to rule on have been those which involved heavy lifting, especially when such lifting was reported to be the employee's regular work. The Committee felt that over-lifting, or overexertion, could occur even during regular activities, but since each lifting injury is a unique situation, the Committee felt it was impracticable to set down specific standards for ruling on them.

A proper interpretation of each lifting situation requires knowledge of the worker, his general physical condition, his physical condition at the time of injury, the weight, size and shape of the object being lifted, the nature of the injury, etc. A decision in such cases depends primarily on a doctor's opinion regarding the extent of the lift in relation to the employee's physical condition and ability, and the nature of the injury.

Interpretation

The Committee on Interpretations studied the circumstances of all of the back cases submitted to it, and agreed that the question of work connection should be determined on the following basis:

A back injury would be considered work connected if:

1. It arose out of an accident or incident such as a slip, trip, fall, blow on the back; or during improper lifting such as with bent back, in an awkward or twisted position; or from working in an unnatural position such as squatting, stooping, cramped, etc.; provided that the doctor authorized to treat the case agreed that the injury could have arisen out of the accident or incident.

2. It occurred during normal routine lifting, if the doctor authorized to treat the case expresses the opinion that the lift being made represented overexertion for the individual involved, and that the injury which resulted could have arisen out of the lift. (In these cases, if the Committee on Interpretations is asked to make a decision, the report on the case must include an opinion from the doctor regarding overexertion.)

3. If it occurred in the same situation as (2) but during a stooping or bending activity within a series of lifts (shovelling, loading bags, etc.) even though no load was being handled at the moment.

A back injury would *not* be considered work connected if:

1. It occurred during a simple stooping or bending action such as would be required to pick up a small or light object, walk under something, or in the preparation of a lift (stooping to pick up something, but not actually beginning the lift, except as covered by (3) of the previous section.)

2. It occurred during normal routine activities, except those specifically identified under (1), (2), and (3) in the preceding section as being reportable.

The above interpretation still is not so precise that every case will fall definitely into one group or another. It is doubtful whether this can ever be accomplished because of the many variables involved in each case.

As mentioned previously, decisions in many cases will depend a lot on the doctor's opinion regarding the relationship between the person, the activity and the injury, and because only the safety man, or someone else in the company, can discuss this with the doctor (the Committee on Interpretations cannot discuss it with the doctor), the safety man is in the best position to rule on the case. *—To page 70*

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The provisions of Paragraph 5.2 of the Standard and the above interpretation do not modify or limit in any way the basic principle of the Standard that all injuries arising out of and in the course of employment are reportable. Any back injury which does arise out of and in the course of employment is reportable. Contrariwise, any back injury which does not arise out of and in the course of employment is not reportable.

The purpose of Paragraph 5.2 is to provide a logical and consistent procedure for determining (for record purposes) whether or not a back case, which becomes apparent in the course of employment, did in fact arise out of employment. Specifically, it removes the presumption that because it became apparent in the course of employment it must have arisen out of employment.

Examples of certain events are cited which, if associated with the occurrence of back disability, shall be prima facie evidence that the injury arose out of employment, but places the final determination on the opinion of the doctor as to the possibility of a casual relationship between the event and the disability.

It is the intent of Paragraph 5.2 to exclude from the record any back injury or condition which did *not* in fact arise out of employment even though it became symptomatic or apparent in the course of employment. This is consistent with the basic definition of a work injury as contained in Section 1 of the Standard.

On the other hand, it is *not* the intent of Paragraph 5.2 to exclude from the record any back injury which *did* in fact arise out of employment, merely because it became symptomatic or apparent in the performance of normal, regular duties. Reportable back injuries can and do occur in the performance of normal, regular duties. Specifically, the possibility of overexertion is not ruled out merely because the particular activity involved at the time of the onset of symptoms is one which the employee has repeatedly performed without injury.

The Committee on Interpreta-

tions hopes that these comments and interpretation of the Standard will provide a more definite basis for deciding back cases, will result in more uniformity in recording them, and will permit the safety man to make more of his own decisions.

PERSONALS

News of people in safety and related activities

Research Psychologist Joins NSC Staff

JOHN J. FLAHERTY has joined the staff of the National Safety Council as director of the Research Division.

Since 1947, Mr. Flaherty has worked as psychologist and personnel and industrial consultant for several Chicago firms. Before that he was assistant engineer for a consulting firm and taught psychology, logic, and philosophy at James Millikin University, Decatur, Ill. His combined background of psychology and engineering, plus additional training in the medical-biological and educational fields, provides him with great scope for his new post.

A graduate of both James Millikin University and the University of Chicago, Mr. Flaherty holds B.S. and M.A. degrees. He served in the Air Force during World War II for more than two years.

He is the author of several articles in technical magazines and a member of the American Psychological Association, Illinois Psychological Association, Chicago Psychological Club, American Association for the Advancement of Science, and the Illinois State Academy of Science.

In his new assignment, Mr. Flaherty will continue the special work which was started by the Council in 1956, the broad objectives of which are to:

1. Collect information about research work in progress in safety and closely related fields.

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2. Assemble, collate, analyze, and distribute information on completed research projects.

3. Encourage the prompt publication of work as it is finished.

4. Collect and develop ideas and proposals for new investigations.

5. Find agencies and means for carrying out meritorious investigations.

6. Encourage and assist investigations by the Council in fields with which it has unique potentialities.

NSC Names Grieve to Head Labor Division

GILBERT G. GRIEVE has been named director of the Labor Division of the National Safety Council, succeeding DAN ADAIR, who resigned recently to become coordinator of safety activities for

Gilbert G. Grieve

the Pacific Coast Association of Pulp and Paper Manufacturers.

Mr. Grieve's successor as staff representative for the Mining Section of NSC's Industrial Department is CLINTON H. HOCH.

Gil Grieve has been a member of the Council staff for 28 years. A 1922 graduate of the University of Wisconsin's engineering college, he was associated with the construction, steel, chemical, and mining industries before becoming staff representative for NSC's Cement, Quarry, and Mineral Aggregates Section and the Mining and Coal Mining Sections in 1929. He will continue to administer the falls of roof campaign for the coal mining industry.

Mr. Hoch worked the past two years in Turkey and Brazil as safety engineer for the Paul Weir Company of Chicago. From 1949 to 1955 he was first-aid and mine-rescue instructor for the Pennsylvania Department of Mines. For 13 years prior to that he was employed by the R.&P. Coke Company, Indiana, Pa., where he started as conveyor miner and advanced to supervisor.

Mr. Hoch is a member of the National Mine Rescue Association and the Coal Mining Institute of America.

Dan Adair joined the Council in 1950 as staff representative for the Wood Products Section. He was formerly supervisor for safety, Department of Labor and Industries, State of Washington, and before that was business representative of the International Woodworkers of America. In 1956, when the Labor Division was formed, he became its first director.

CLARK D. BRIDGES has been named assistant managing director of the Industrial Medical Association with headquarters at 28 East Jackson Blvd., Chicago. He assumed this newly-created position January 1 after serving for three and one-half years as assistant secretary of the American Medical Association's Council on Industrial Health.

Mr. Bridges has been active in all major phases of occupational health and safety for more than 30 years. His background embraces roles as consultant to the Illinois Manufacturers Association, industrial hygienist for the National Safety Council, executive in health and safety education in the casualty insurance field, war training instructor in industrial hygiene and safety engineering at the Illinois Institute of Technology and liaison representative to many national groups concerned with occupational health and traffic safety.

Mr. Bridges is active as a member of several national committees and particularly the President's Committee on Employment of the Physically Handicapped. His book, *Job Placement of the Physically Handicapped,* is regarded as the standard reference volume on the subject. He is a charter member of the American Industrial Hygiene Association and served as first president of its Chicago chapter.

Obituary

SYDNEY V. JAMES

SYDNEY V. JAMES, for 28 years safety engineer with Underwriters' Laboratories, Chicago, died suddenly November 14. He was 71 years old.

Until his retirement in 1951, Mr. James had been engaged in numerous research projects, including tests for safety belts and floor surfaces. Among his inventions was a slip-resistance tester for floor coverings.

A native of Chicago, Mr. James received two engineering degrees from Armour Institute and studied naval architecture at Massachusetts Institute of Technology.

SYDNEY V. JAMES with slip-resistance tester for floor surfaces which he developed at Underwriters' Laboratories.

Mr. James was an accomplished violinist and for 30 years was concertmaster of the Chicago Businessmen's Symphony Orchestra, playing violins which he himself had made.

Surviving are the widow, two sons and a daughter.

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Pressed Metal Institute Award Goes to NSC

PRESTEEL AWARD OF 1957 goes to National Safety Council. Carter C. Higgins (left), award committee spokesman, Pressed Metal Institute, presents 18-in. gold bust to Arthur S. Kelly, NSC, in ceremony in Bermuda.

FOR ITS "outstanding job in reducing the pressed metal industry's accident frequency rates" the National Safety Council has been awarded the Presteel Award of 1957.

With those words, the Pressed Metal Institute presented the 18-in. gold bust of a knight in armor to Arthur S. Kelly, director of technical publications and staff representative for the Power Press and Forging Section of the Council, at the institute's annual convention October 16 in Bermuda.

"The Council's efforts have been of substantial value to our industry," said Carter C. Higgins, president of Worcester Pressed Steel Company and spokesman for the award committee.

The award was established four years ago by the Worcester, Mass., company to commemorate its 50th anniversary.

"The National Safety Council considers it a high honor to receive the Presteel Award," said Ned H. Dearborn, Council president, who was represented at the convention by Mr. Kelly.

The industrial group that includes members of the Pressed Metal Institute has cut accident frequency rates 68 per cent since 1946, and severity rates 53 per cent.

Hydraulic Fluids

—From page 48

fluids are essentially the same chemically and physically, except for viscosity. They have mechanical and chemical stability which, in many cases, exceeds that of petroleum oils. They are more resistant to oxidation (and accompanying acid formation) than are natural petroleum products.

Furthermore, acids formed by the intentional decomposition of these phosphate esters in the laboratory are basically acid moieties of the organo phosphorus or phenolic types, which have significantly less corrosive effect on most metals than the carboxylic acids formed by the thermal destruction of petroleum products.

Fire Resistance

How safe is this fluid? One point must be kept in mind: fire-resistant does not mean non-flammable. Every fire-resistant hydraulic fluid on the market will burn under certain conditions. Each one, however, has the ability to resist fire to varying degrees depending on its composition and the circumstances of its exposure to fire or heat.

In the operation of hydraulic equipment, the largest percentage of accidents occurs from the rupture of some vessel, line, or joint, releasing hydraulic fluid under high pressure. Such a break can dribble, shoot, and spray fluid as far as 50 to 60 ft. The fluid may be exposed to hot metal surfaces, open flames from gas burners and torches, molten metals in die casting, electrical arcs and/or sparks, and a variety of other ignition sources.

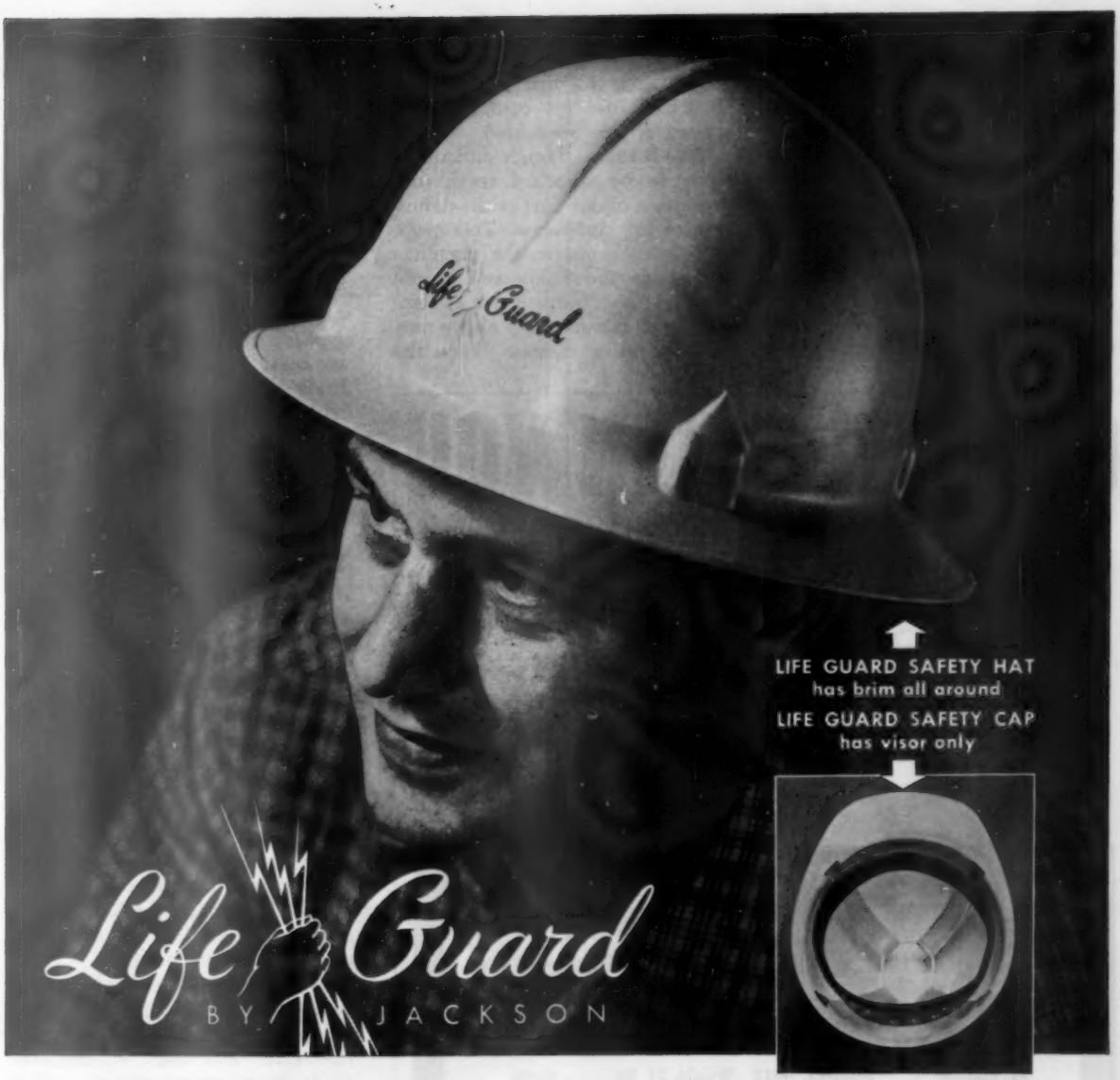
The reaction of the fluid to these different circumstances, therefore, is of prime importance to the user. The straight phosphate ester fluids have the following typical properties (which may vary slightly with viscosity):

Flash point	455 F.
Fire point	685 F.
Autoignition temp	1175 F.
SAE-AMS hot manifold test	1400 F.
Molten metal ignition test (flood)	1700 F.
Molten metal ignition test (drip)	1500 F.

In addition, a spray of atomized phosphate ester at 1,000 psi. was impinged on a hot metal plate (over 1200 F.) in the presence of flame. There was no ignition and no flash back. With the same test on a 1400 F. surface, there was intermittent ignition but still no flash back.

These tests, while reproducible in the laboratory, do not always reflect the exact conditions encountered in a busy plant and the figures should be used as a guide or comparison, rather than as absolute values around which a safety program is built.

A most important feature of the phosphate esters is that they do not flash back from the ignition



To ELECTRICAL WORKERS, these all-plastic Safety Hats and Caps offer top protection, comfortable wear, and attractive appearance.

They surpass the requirements of the Edison Institute specifications AP-1-1954, resist far in excess of 20,000 volts under electrical tests, thus providing an exceptional safety margin.

What's more, the LIFE GUARD also passes the requirements of Federal Specification GGG-H-142b for construction workers' hats and is therefore recommended as a superior ALL-PURPOSE SAFETY HAT.

The *Hat Shell* is smooth inside, without hazardous and uncomfortable projections. It is made of a specially developed injection molded plastic.

The *Headgear Assembly* combines great strength with comfortable flexibility for better cushioning of impact. Headband and crown straps are molded in one piece of a special polyethylene plastic, soft but non-absorbent, combined with a soft-backed, leatherette-finished sweatband, all around the head. It is the fastest and easiest headband to adjust, and clearly marked in hat sizes. The headgear straps may be wiped clean while attached to the hat or the entire headgear can be removed, easily and without tools, for complete cleaning and sterilizing.

The Safety *Hat* has full brim all around, the *Cap* has visor in front, narrow brim at the sides and back. Both LIFE GUARDS are made in white, yellow and grey.

A *Chin Strap* is optional. Made of colorful, high quality elastic webbing, with smooth, napped cotton inside, it has plastic fittings to adjust and attach to the headgear.

Manufacturers of Jackson Fiber Glass Safety Hats and Welding Helmets, Welding and Chipping Goggles, Eye and Face Shields. Also Cap-and-Helmet, Cap-and-Goggle, Hat and Face Shield Combinations.

For Arc Welding: Electrode Holders, Cable Connectors, Splicers and Lugs.

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source to the point of system ruptures. A good part of the danger involving the use of flammable petroleum products stems from the fact that, once ignited, they will continue to burn at ordinary temperatures and will support and spread the combustion wherever the liquid goes. This causes flash back to the point of origin and keeps the fire going until the fuel is consumed.

Phosphate ester fluids will burn only at the point of ignition, and then only when the fluid temperature *at that point* is maintained well above its fire point limit. Combustion is confined and spread of fire prevented.

This feature, though difficult to measure by standard tests, contributes a major part of the definition of fire resistance. This property is inherent in the chemical nature of the fluids and is not affected by continued use at temperatures considerably above normal operating ranges. Since the fluids contain no additives or aqueous components, no fluid maintenance is required to assure the user of continuing fire resistance.

Handling and Toxicity

Some questions remain to be resolved before the toxicity of these products is finally established. Beyond the fact that they should not be taken internally, standard plant hygienic routine appears adequate to safeguard workers. Straight phosphate ester fluids contain no chlorinated hydrocarbons, eliminating the possibility of chlorine-bearing fumes being evolved by contact with hot surfaces.

Lubrication

Since the phosphate esters have polar groups, their molecular structures align themselves along a metallic surface, creating a strong adhesive bond between the fluid and the metal. This contributes to the so-called "extreme pressure" lubricating value of the liquid and would indicate better lubrication down to boundary conditions than entirely non-polar petroleum oils. A cross section of industrial experience in almost every conceivable type of equipment shows the phosphate esters to have essentially the same lubricating service life as premium grade petroleum products.

In Figure 1* the load-life for bearings operating in petroleum oil is represented by the dotted line (A). The slope of this line (n-3) is a representative value conforming to bearing design characteristics established for oil. The actual results of this test using the phosphate ester is plotted as line B.

Not only does the phosphate ester show the greatest modal bearing life of the fire-resistant fluids tested, but at loads below 8,000 lbs. the plot suggests that the phosphate ester is actually superior to petroleum oil as a lubricant.

Thus the engineer can select a fluid which will not have any

* From *A Study of Combustion Resistant Hydraulic Fluids as Ball Bearing Lubricants*, by H. V. Cordiano, E. P. Cochran, Jr., and R. J. Wolfe of the N. Y. Naval Shipyard, Brooklyn, N. Y.

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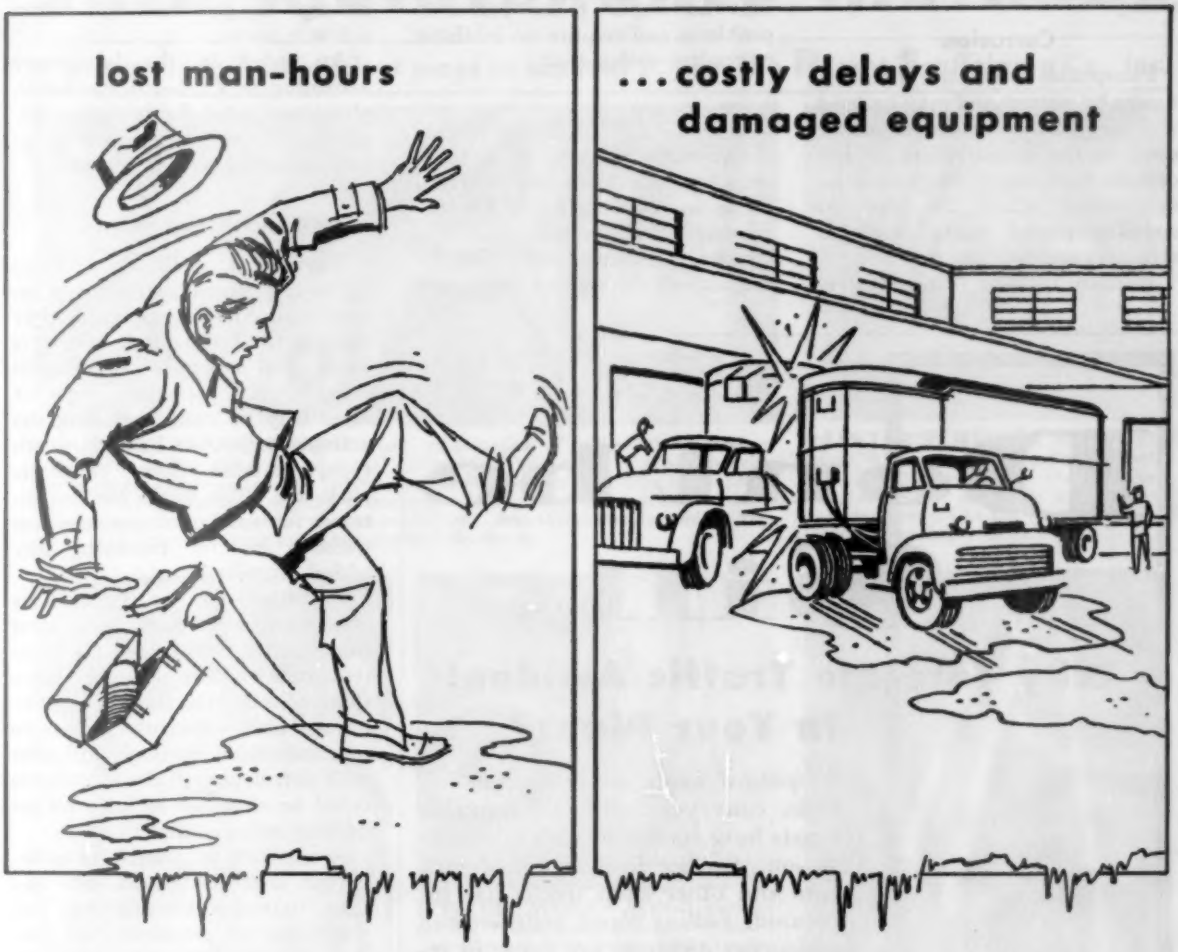

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major effect in reducing pump life or decreasing hydraulic efficiency.

Corrosion

Phosphate esters are non-corrosive by nature and may be used with any of the metals commonly used in the manufacture of hydraulic equipment. They have no deleterious effect on zinc or cadmium-plated parts, such as strainers and fittings.

Because of their non-corrosiveness and their extremely low vapor pressure, these fluids present no vapor phase corrosion problems and require no inhibitor to control such action.

Foaming

Excessive foaming or a tendency to retain foam can be a vital factor in reducing pump life and causing erratic cycle operation. Proper pressures will not be maintained throughout the system and the lubrication of the pump may break down sufficiently to damage it permanently within a few minutes.

As tested in the laboratory according to VV-L-791 standards, phosphate ester fluids (example: 220 S.S.U. at 100 F.) are properly classified as non-foaming.

Fluid Maintenance

Having no additives and no aqueous component, phosphate esters require no maintenance other than normal filtration, which is an integral part of most hydraulic circuits. Any standard type of filter may be used, including the activated clay or Fuller's earth type, metallic disk, cellulosic pack, etc. The fluids can be filtered for minimum particle size without fear of removing any added ingredient.

Filtration may be repeated as often as desired, vastly increasing the effective life of these fluids by reclamation. This saving more than offsets the slightly higher initial cost. Barring excessive contamination through dilution with petroleum oil, these products could be expected to have an indefinite service life.

A number of plants have reported that the useful life has been extended considerably beyond that of petroleum oil previously used. Most lubrication engineers, however, schedule these fluids for replacement at approximately the same intervals as for petroleum oils.

Equipment Conversion

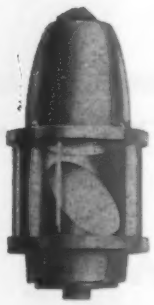
Converting to phosphate ester fluids is an important, but not burdensome, task. Assuming that petroleum oil is now in the circuit, follow this procedure:

Drain the system as thoroughly as possible, blowing down lines and valves where practicable. Any oil remaining will mix with the new fluid without precipitation or separation. Petroleum contamination will reduce fire resistance and should be kept below 3 to 5 per cent.

Interior painted surfaces of sumps and reservoirs should be cleaned and the paint removed. Phosphate ester will lift or soften

Don't be Silly

Why Tolerate Traffic Accidents in Your Plant?



27S BEACON RAY LIGHT

FIRE-BALL LIGHT

Suspended loads on cranes, monorails, conveyor belts and movable hoists have increased with mechanization. *Surface level* traffic of fork lifts and other shop trucks has increased. *Falling object, collision and pedestrian accidents* are rising in industry.

The 27S Beacon Ray light can supplement audible signals to pinpoint permanent danger spots in your plant.

Shop trucks can supplement their audible warnings with the new Fire-Ball 360° revolving light.

Don't gamble a death, the misery of injury or lost-time accidents. A few dollars for modern visual and audible signals can eliminate the causes.

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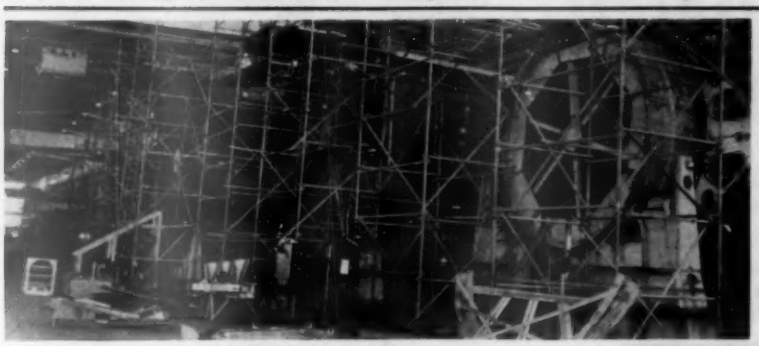
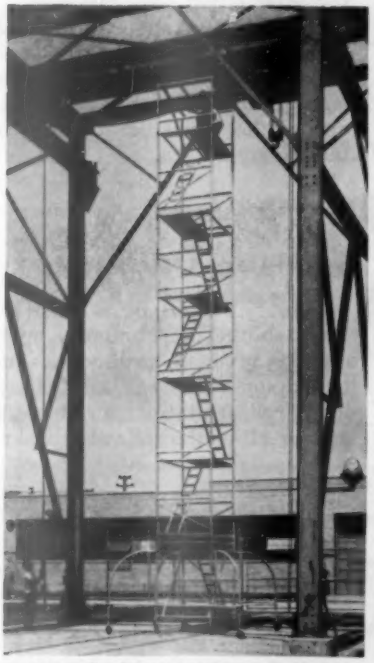
Safe Maintenance Methods

A picture report on efficient ways to scaffold . . . by The Patent Scaffolding Co., Inc.



INDUSTRIAL SCAFFOLDING—During construction of hull sections for new atom subs at the Mare Island Naval Shipyard, "TubeLox"® Scaffolding helps workmen get safely around the curved shapes. Made with only four basic parts, this scaffolding is erected rapidly to conform to almost any shape, size or contour and on any terrain, if exterior work is considered. Adjustable couplers and a variety of tube lengths permit unlimited scaffold placement.

PAINTER'S HELPER—"Trouble Saver"® Sectional Rolling Scaffold with 12"-wide Featherweight Stages gives Gombert Bros., an easily moved, safe painting scaffold at the North Belmore (N.Y.) Elementary School.



ROLLING ALUMINUM TOWER—To repair a crane at the Public Service Electric & Gas Co., Bergen County Switching Station, N. J., a Model B Aluminum Sectional Rolling Scaffold is used. Four outrigger supports increase base area to 10'x10' for greater stability at extreme heights. Five 6'-high sections atop the 6'9½"-high base bring workmen safely up 36'-9½" under the crane mechanism.

REFINERY WORK—At the Tidewater Oil Co., Wilmington, Del., 3500 "Trouble Saver" Scaffolding frames and 15 miles of "TubeLox" Scaffolding are used by C. F. Braun & Co., contractor, to get strong, level, safety-assured working plattorms on refinery's varied structures.

LIGHT-DUTY SCAFFOLDS—Designed for light-duty work, "Gold Medal" Junior Safety Swinging Scaffolds provide extra-safe, quick working levels on tanks, buildings and other structures. Suspended from above by 5/16" galvanized steel cable, these scaffolds have 28"-wide plattorms with double, steel-reinforced side-rails; hinged toe-boards; and 16', 18', 20', 22', 24'-lengths.

"GOLD MEDAL"®— Safety Platform Step Ladders. Broad working platforms. Top quality construction. U.L. approved. Sizes: (total height) 5' to 20'.

NEW STEP LADDER—Aluminum Safety Platform Step Ladder with non-slip safety platform and steps. Strong, lightweight. Heights 5' to 14'. Other aluminum models include: Extension Ladders, 16' to 40'; Heavy Duty Step Ladders, 4' to 14'; Platform Step Ladders, 5' to 14'; and Single Ladders, 8' to 20'.

Write for free copy of "Controlling Costs", Bulletin G205R. Also, see the Yellow pages of your 'phone directory for the nearest Patent Scaffolding Co. office or representative that *sells* or *rents* "Gold Medal" Scaffolds.

FOR GREATER SAFETY...EFFICIENCY...ECONOMY

THE PATENT SCAFFOLDING CO., Inc.

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most common paints and this could lead to clogged valves if not forestalled. Since vapor phase corrosion is not a problem, interior surfaces do not require painting, except in unusual circumstances. Special paints, resistant to the fluids, are available.

Packings, seals, and gaskets should be made of materials compatible with the fluids. Butyl rubber, silicone rubber, teflon, and nylon—as well as a number of specialty products recommended by individual manufacturers—are used.

Ordinary elastomers, neoprene, and buna types used in petroleum service will generally swell in the presence of the phosphate ester, and should be replaced. However, only those gaskets, "O" rings, etc. that are in dynamic use, where motion is involved, need be replaced at this time. Static seals may be left intact and need be changed only when the equipment is dismantled for repair or regular maintenance.

When replacing seals, the packing manufacturers should be consulted, since they are familiar with phosphate ester fluids and with the requirements of the seal in the particular machine involved. Most major packing producers are fully equipped to provide such service and assistance.

Where piping joints have been disturbed during conversion, it is advisable to reassemble them using a pipe-joint compound resistant to these fluids. Several types are available.

After the system has been reassembled and filled with the new fluid, a filter, if not already provided, should be put in the line for the first day or two of operation. This will collect any foreign particles dislodged during the work and any bits of paint which the ester might have removed.

Properly installed and used, these fluids will provide a level of safety unattainable with petroleum products, without sacrificing any of the hydraulic qualities of the flammable oils.

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Shown is one of the installations for Commonwealth Edison Co., Chicago, made by C. J. Electric Co.

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Circle Item No. 36—Reader Service Card

$4 Billion Well Spent

—From page 33

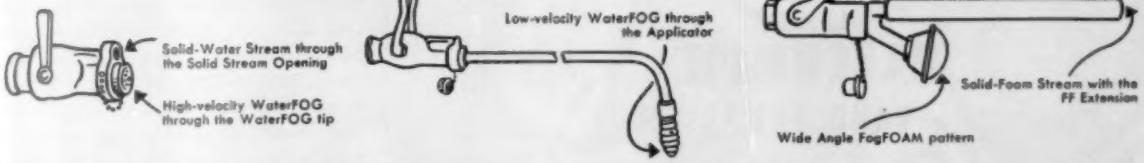
ment so that maximum support may be given to production and to employee comfort and safety, industrial sanitation may include any or all of the following tasks:

1. Structural cleaning.
2. Floor maintenance and cleaning.
3. Maintenance of personal facilities — washrooms, lockers, offices, lounges, in-service feeding facilities, etc.
4. Machine and equipment cleaning, both in place and in special stations and facilities.
5. Control of insect and rodent pests.
6. Collection, salvage and disposal of refuse and product wastes.
7. Operation of uniform and laundry services and sanitation stock room and supply inventory.
8. Protection of raw materials and finished products against damage and deterioration.
9. Supervision of plant security personnel.
10. Care of exterior areas, includ-

Rockwood SG-60 WaterFOG Nozzle is five nozzles in one

The lightweight Rockwood SG-60 WaterFOG Nozzle *eliminates "special" or single-purpose nozzles!* It actually does the work of five nozzles to put out fires faster, safer and more economically.

Here's what we mean . . .


Solid-Water Stream through the Solid Stream Opening
High-velocity WaterFOG through the WaterFOG tip
Low-velocity WaterFOG through the Applicator
Solid-Foam Stream with the FF Extension
Wide Angle FogFOAM pattern

Here's what you need to put out ordinary combustibles and flammable liquids . . .

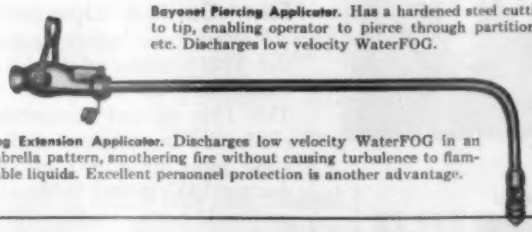
FOAM and "Wet" Eductor with the new FW Metering-Check Valve. Introduces Rockwood FOAM or "Wet" into hose lines, automatically proportioning correct amount of FOAM and "Wet" to water. Also usable wherever one liquid is fed into another on a fixed percentage basis.

Rockwood Double Strength FOAM. Puts out fires in flammable liquids, and in ordinary combustibles, quicker, at lower cost. Three parts FOAM and 97 parts water create a heat-resistant blanket.

Rockwood WET. One part WET mixed with 99 parts water increases water's penetration and extinguishing action. Gives quickest results against deep seated fires. Saves time, water, manpower.

FF Extension Unit. Shown with Type SG-60 Nozzle. Discharges Rockwood FOAM in a solid stream or as FogFOAM. Wide angle makes it possible to cover large areas at one time.

Bayonet Piercing Applicator. Has a hardened steel cutting tool attached to tip, enabling operator to pierce through partitions, into interiors, etc. Discharges low velocity WaterFOG.



Long Extension Applicator. Discharges low velocity WaterFOG in an umbrella pattern, smothering fire without causing turbulence to flammable liquids. Excellent personnel protection is another advantage.

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ing landscaping, parking, roadways and walkways.

11. Maintenance of safe working conditions.

12. Maintainance of facilities to maintain industrial hygiene.

13. Over-all sanitary surveillance.

Accident prevention and occupational hygiene, of course, require the services of safety experts and occupational hygienists. They have their specialized functions of evaluating hazards, prescribing corrective measures, surveying results and stimulating proper employee attitudes and practices. But there remains the day-to-day necessity of maintaining safe and sanitary working conditions.

The book is concerned with the first four of the industrial sanitation elements listed above. These tasks are fundamental and common to all buildings. They should be viewed in relation to the whole industrial sanitation function. By so doing, this function will be more likely to receive competent supervision, better tools and more capable personnel.

The book examines in order and attempts to codify the many interdependent factors involved in the industrial sanitation picture. Among the topics covered are: the nature of the cleaning problem, types of cleaning materials, fitting the cleaner to the need, selection of cleaners, organizing the cleaning problem, and determination of cleaning costs.

Charts and tables permit ready references to such essential data as recommended use of different cleaning materials on different surfaces, time standards for floor maintenance operations and typical work routines in order of performance, a typical facility sanitation rating form, and ways to assay and reduce time and labor costs in sanitation maintenance.

The concluding chapter contains brief accounts of outstanding sanitation programs from widely differing organizations—Eastman Kodak Company, Roswell Park Memorial Institute, General Motors Research Laboratories, Strawbridge and Clothier department store, National Biscuit Company, Port of New York Authority, Nationwide Insurance Companies, U. S. Post Office Department, and Waldorf Astoria Hotel.

Copies of the booklet, *Building and Equipment Sanitation Maintenance*, are available from Association of American Soap and Glycerine Producers, Inc., 295 Madison Ave., New York 17, at 75 cents a copy.

15th Annual Safety Film Contest Opens

ENTRIES are being received for the 1958 contest of the National Committee on Films for Safety. This 15th annual competition includes motion pictures and sound-slide films produced or released during 1957 in the fields of occupational, home, traffic and transportation, and general safety.

There is no charge for entering the contest, nor for awards to sponsors of winning films. For entry blanks or further information, contact William Englander,

The risks of injury or fire from spilled industrial liquids are too serious to be neglected. Furthermore, dripping spigots represent waste as well as poor plant housekeeping.

Blackmer *Flo-Master* and Blackmer Rotary hand pumps are your best preventative against these dangers. They feature easy pumping, self-priming and long service life. Underwriters' Laboratories approved models available.

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Slings and Hoist Lines

now...thanks to Tuffy...three make the trip instead of one

The Toronto Iron Works makes tanks on a production line basis. Plate steel is rolled and welded into 8'-long tank sections at one end of the plant. The sections are picked up by an overhead crane and transported to the far end for final assembly. Formerly they were carried on a chain... a single section per trip, tying up the crane all day.

In the course of a plant survey, which is a valuable part of the service rendered by Tuffy distributors, a better idea came up. Why not make a rigging of Tuffy Slings ...handle all three sections of a tank at the same time... free the crane for other work? That's exactly what is happening in the picture above. Result: easier handling, ⅔ less crane time, big production-dollar savings. Further result, in the words of a company official:

"This was the first time this plant used Tuffy Slings. Now they have standardized on them."

Tuffy Slings are ideal for this job (and countless others) because of their superb combination of super-strength and free-flowing flexibility. It's just about impossible to kink a Tuffy Sling; and if you should, the kinks smooth out with no damage done.

Another Tuffy plus feature: Tuffy's pressed-on ferrule is applied over tuck splices under tremendous pressure to give the sling eye 100% of fabric strength.

Your Tuffy Distributor: a Good Man to Know

He's stocked to meet your needs; ready to make fast delivery of your Tuffy Slings, Tuffy Hoist Lines (famous working partners of Tuffy Slings), and Union Wire Rope. And he's qualified to help you find money-saving ways of using Tuffy products in your operation. Get in touch with him.

FREE! Tuffy Sling Handbook

Gives full data on Tuffy Sling types, uses, dimensions, weights and rated loads. Plus a complete rigger's manual and engineer's handbook on wire rope constructions and specifications. Write for your copy now.

union Wire Rope corp.

Specialists in high carbon wire, wire rope, braided wire fabric, stress relieved wire and strand

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secretary, National Committee on Films for Safety, 425 N. Michigan Ave., 5th floor, Chicago 11.

Deadline for contest entries is February 10, 1958.

Safety Engineer Honored For First-Aid Work

WILLIAM J. M. REDWOOD, safety engineer for Algoma Steel Corp., Sault Ste. Marie, Ontario, was among 78 Canadians who were honored with the order of St. John of Jerusalem at an investiture by

William J. M. Redwood

His Excellency Governor General Massey of Canada.

Men and women in many walks of life were invested with the Order which dates back to the capture of Jerusalem by the Crusaders in 1099. It is the oldest order of chivalry in the British Commonwealth.

Mr. Redwood was honored for his many years of public service through the St. John Ambulance Brigade. He is honorary treasurer and an active member of Division 87 at Sault Ste. Marie. He was previously honored with the King George VI Coronation Medal for his work on behalf of ex-service men and women.

Mr. Redwood served with the Canadian Expeditionary Force in World War I and was discharged with the rank of captain. In World War II he was a company commander in the Reserve Army. He is a professional engineer in the Province of Ontario and a member of the American Society of Safety Engineers and the American Institute of Electrical Engineers.

Del-Mar-Va Council

—From page 28

The Del-Mar-Va Council's participation will follow the general outline of the National Safety Good Turn with a kick-off during Scout Week in February; emphasis on traffic safety during March, April, and May; emphasis on outdoor safety during June, July, and August and emphasis on home safety during September, October, and November.

Committee chairmen were appointed for each of these phases and for publicity. It was decided that the council commissioner, Dr. Walter A. Dew, executive secretary of the committee on contributions and memberships for the Du Pont Company, and his commissioner staff would be "safety salesmen" charged with the responsibility of getting the program to the 540 Cub, Scout, and Explorer units of the council.

Emile F. du Pont, director of the employee relations department of the Du Pont Company and a director of the National Safety Council, was named to head the kick-off ceremony. He is assisted by C. T. Foster, Jr., vice-president and general manager of Delaware Coach Company and president of the Delaware Safety Council. Their plans are already under way for a rally on February 8, in Rodney Square, Wilmington, to which leaders of states, municipalities, and safety organizations will be invited.

Chartered busses will bring Scouts and leaders up the peninsula to Wilmington where a parade will take place in the city, ending at Rodney Square for the ceremony. Two bands are lined up for the parade. Following the playing of the "Star Spangled Banner," there will be an explanation of the Good Turn, introductions, presentation of a safety pledge to the Governor and a statement and proclamation by him, and tableau demonstrations depicting various aspects of traffic, outdoor, and home safety.

As a finale, a large "Live for Tomorrow" pennant will be given to representatives from each of the 12 districts along with miniatures of the pennants to be given to each of the more than one thousand Scout representatives. A final pledge will be made to "Live for Tomorrow" with all of the pennants being waved.

One boy and one leader from each Scout unit in the council will be invited. They will receive shields denoting their units' pledges to participate in the Good Turn, and will in turn hold kick-off ceremonies in their various district units.

The other committee chairmen are: Traffic Safety—Lt. Col. John Ferguson of the Delaware State Police, with F. J. Sievers, Jr., general manager of the Delaware Motor Transport Association and a director of the Delaware Safety Council, as vice-chairman; Outdoor Safety—Ernest du Pont, Jr., in charge of employee recreation and activities for the Du Pont Company, with Dorsey B. Kinnamon, insurance broker and vice-president for public safety of the Delaware Safety Council, vice-chairman; Home Safety—Maj. Myron D. Keefe, staff Explorer officer for the U. S. Air Force at the New Castle County Air Base, with Curtis B. Patterson, safety and fire protection consultant for the Du Pont Company and member of the home safety inventory committee of the National Safety Council, as vice-chairman; Publicity—Harvey C. Smith, manager of Radio Station WDEL and a director of the Delaware Safety Council.

Working directly with Mr. Queener are three advisors—J. James Ashton, manager of the Delaware Safety Council; G. E. Grotz, district representative of the National Safety Council, and M. D. Strickland, president of the Delaware Safety Engineers Club.

The organization of the council committee is duplicated in each of its 12 districts. Other experts have been selected to serve in the

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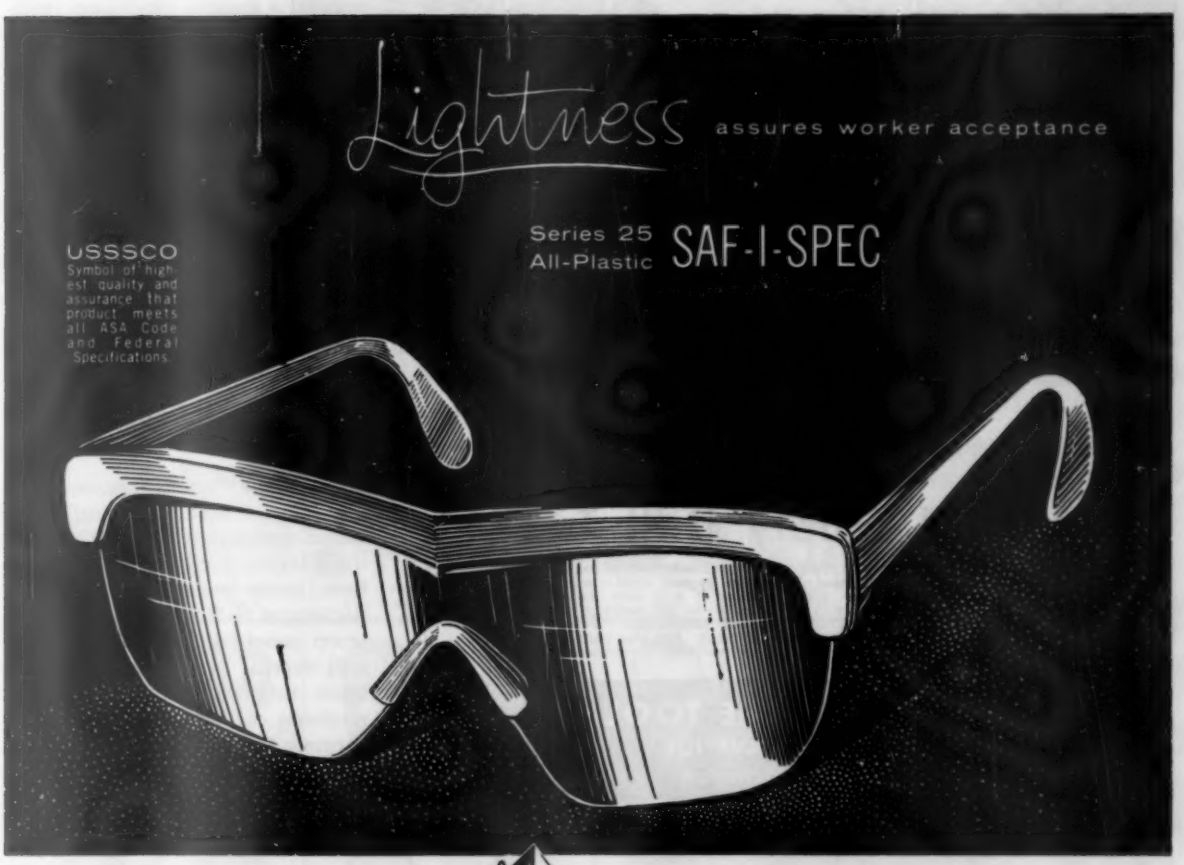
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various phases of the traffic safety, outdoor safety, and home safety sections of the Good Turn.

The project was announced in the September issue of the council's monthly newspaper, *The Scouter*. On the 23rd of that month at a council coordinating meeting, the district health and safety chairmen were notified of the program and the council executive committee formally adopted the Good Turn. Names of the top men in the Good Turn organization were publicly announced.

The October *Scouter* reported progress on the Good Turn, and a speakers bureau was set up. Speakers have already addressed several service clubs, the Delaware Safety Engineers Club, and the Governor's Fire Prevention Conference, and appeared before the Delaware Youth Traffic Safety Conference in early December. News coverage has been good.

Also in October, the general chairman informed the commissioners of their part in the program at a week-end conference at Rodney Scout Reservation, and the first formal National Safety Good Turn committee meeting was held. By this time a publicity schedule had been set up, each of the members of the over-all committee had a job analysis in hand, and the project was rolling.

By the end of November, the organization was reaching into the lower echelons. Each of the 12 districts in the council had appointed a general chairman (generally the health and safety committee chairman), and each had chairmen for traffic, outdoor, and home safety participation. Participation pledge sheets are flowing in from the units. Plans for the kick-off were also well in hand, and the council now believes it has an organization that will start the Good Turn off with a bang on February 8 and produce maximum results throughout the rest of 1958.

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Creve Coeur Council

—*From page 29*

through the "safety salesmen" at the district level. Carefully selected community men will "sell" the various projects through the Scout troop leaders and American Society of Safety Engineers. The troop people and ASSE members will recruit people in their districts to promote the aims, and methods of getting the job done through the boys.

Once the safety salesmen have a full knowledge of the program, they will work through the units in the districts and will call upon respective chairmen to help "sell" and explain the various phases of activity during the period of March through October.

The safety salesmen committee will get its directions from A. S. Thannum, safety and plant protection supervisor for LeTourneau-Westinghouse Company of Peoria.

Peoria's first phase of action—traffic safety—will be headed by Daniel Hansen, traffic engineer for the City of Peoria, and will be

—*To page 92*

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Against Wind and Lightning

LATTICE TOWERS are fast becoming a part of our modern scene. Radio and television, microwave communication, and radar are a few of the uses of such structures. When a few years ago, Connie and her wicked sisters slashed inland, the toll of such structures was heavy.

Because of the interest in steel towers for conductor supports, as covered in the National Electrical Safety Code, the National Bureau of Standards began a study of such damage and a check of the design data. In order to show the difference in wind loading of four models with the same frontal area, a small wind tunnel was put on display at the National Safety Congress. The wind loading on the model, which was attached to a pivoted platform, was counterweighted by a sliding weight on a lever arm. With the same wind velocity, this loading varied by a 2-to-1 ratio.

The models included a solid shaft, a cylindrical section lattice, together with two sizes of angle lattice; the latter showing the higher values.

The other part of the exhibit was a pair of inch-to-the-foot models of the test structure now being used in the National Bureau of Standards High Voltage Laboratory for a study of lightning on metal-roofed and metal-sided buildings, and on the behavior of metal-foil and foil-coated insulation under lightning discharge.

Either of these models, which were mounted on a metal covered turntable, could be brought under the "cloud" and hit by a miniature stroke of lightning. One model with unbonded and ungrounded metal roof and sides showed the possible fire sources along the gap between the roof and side and between the side and ground. The other model showed how lightning reaching insulating foil might jump to grounded metal such as "BX," water pipe, or heating equipment.

Three large photographs of actual test strokes of 12,500 amps at 2,000,000 volts in the National Bureau of Standards High Voltage Laboratory formed a striking background for the exhibit.

Voice of the Reader

Let's have your views on current topics. You don't have to agree with us

Gestapo Methods

SAN BERNARDINO, CALIF. In "Voice of the Reader" for December, Mr. Nathan Feigenblatt, Jr., scores the use of radar and unmarked cars to catch speeders. I buy every word he says.

When we have to resort to "enforcement" to put across a safety program, I feel we have fallen down in the first two E's of safety: education and engineering. Of course, the average person has no idea of what safety work comprises; therefore, they adopt what they think will stop accidents so their nearest approach is through the back door.

The fear campaign and unrestricted and downright malicious law enforcement as the new approach to safety as mentioned in Mr. Feigenblatt's letter is bordering on an organized gestapo that will develop into an octopus to the detriment of safety work and safety personnel.

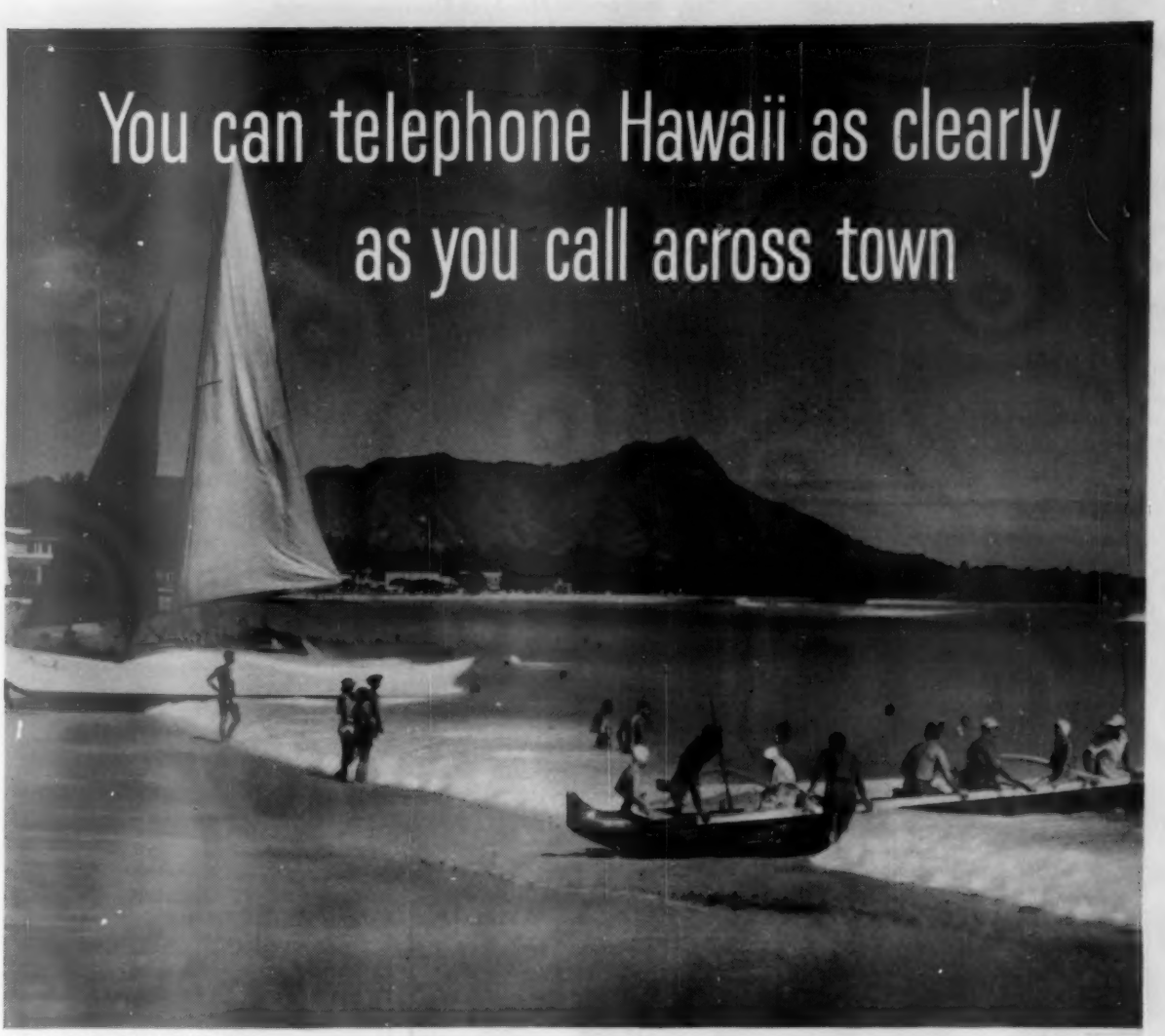
In the November issue an article by Mr. Ned Dearborn asks, "Where Have We Failed?" That is a good question and I am sure that the average safety man knows the answer. One way of answering it is by asking another: "Have we done all there is to be done in the matter of engineering and educating for safety?" It is my opinion that we have not scratched the surface yet in comparison to what we will have to do to have a workable safety program that will bear results without having to resort to enforcement.

If and when it is necessary to call upon the police and judiciary to put across a safety program, it is high time for all safety personnel to start looking around for a different job because the average safety man is not a policeman and the type of work he has been doing gives him the impression that safety work is on a higher plane than just walking a beat with a weather eye on the lookout for unsafe acts or violations.

It might pay all of us to review "Standards of Concern to the Safety Engineer" by Mr. Arthur S. Johnson (*Journal* supplement, February 1957). On page 8 of the article he states, "I am convinced that the material good things in our American scheme will carry us naturally to a higher spiritual plane; the hangover of viciousness in its various forms, requiring punitive controls, is a relic of barbarism."

Hitler had a system of punitive controls and Russia has a way of doing things that is unlike the

You can telephone Hawaii as clearly as you call across town



Waikiki Beach in Honolulu

New underseas telephone cables now link United States mainland and the Hawaiian Islands

Another historic advance in communication service has recently been completed.

For years you have been able to call Hawaii by *radio*telephone. Now new telephone *cables* have been added, stretching for 2,400 miles under the Pacific Ocean, connecting the United States mainland and Hawaii.

Added to the present radiotelephone circuits, the new cable system provides more and faster and better service. It makes it possible for you to telephone to and from the Hawaiian Islands as clearly as you call across your own home town. Just give the operator your call.

Bell Telephone System

KNITTING THE WORLD TOGETHER

The original certificate of incorporation, American Telephone and Telegraph Co., February 28, 1885, includes these prophetic words: "*. . . and each and every of said cities, towns and places is to be connected with each and every other city, town or place in said states and countries, and also by cable and other appropriate means with the rest of the known world as may hereafter become necessary or desirable . . .*"

American way. Are we trying to get in the same league?

There is an old saying, "Christianity is a fine thing; it should be given a chance." I feel that engineering for safety and education for safety are fine, and they, too, should be given a chance.

—JOSEPH J. MOORE

Let's Have Some Positive Thinking

CLEVELAND, OHIO. Like many of my fellow safety engineers I was indoctrinated in accident prevention about 18 years ago—*negatively*. As the years have gone by I have gotten sick and tired of the negative psychology of safety, so I came to the conclusion that my plant people must be tired of it too.

I could draw up a long list of things we safety people do and say which emphasize the negative and the failures in human experience, but I prefer to spare you and myself. If we know our "game," we can discover these things for ourselves.

I take issue with Mr. Jack Dunlap (quoted in "Safety Valve" for December)—or with you if you have injected your own words—on the "all-out program of scientific research to find the answers." What we need to know—and to apply is more about *human behavior that leads to safety*.

We call ourselves *safety* engineers when we should be calling ourselves, judging by our actions and words, *accident* engineers. I think we need to change our own thinking and acting positively before we can help our people to achieve safety.

For example, "The National Safety Council predicts that the National Traffic Safety Campaign will save X number of lives during the forthcoming holiday. Tune in your radio or television set for the news on holiday traffic safety. Make sure yours is one of the lives saved, etc."

As another example, "Our safety records show that during the past year we prevented accidents so well that our safety score improved from 95.2 per cent to 97.3 per cent. This means that an additional 2.1 per cent of our employees succeeded in completing a year's work safely.

"We salute every individual who contributed to this record by assuming personal responsibility for his own safety and the safety of his fellow employees. On this firm foundation there is every reason to expect that our safety score will be close to 100 per cent next year."

We've been crying "Wolf, wolf!" Let's start emphasizing the other side of the coin. Let's start making safety something to strive for and be proud of instead of something to be feared and avoided.

—JOHN N. CARR, Safety Director, *The Lubrizol Corp.*

No Snakes for Him

TULSA, OKLA. Unless my eyes deceive me, the gentleman holding the boa constrictor shown on page 269 of the December issue is Paul Saunders of Medical Supply Company, inventor of the famous Saunders Snake Bite kit.

I've known Paul for a number of years, and that infectious smile is ever present—even when handling snakes. For me, he can have that job; that's strictly for birds like Paul.

Enjoyed this issue very much and it will remain in my active file for all of 1958.

—LEE H. SCHRIMPF, *Safety Engineer, The Texas Co.*

(Thanks for correcting us on the identity of the snake charmer. —*Ed.*)

Four Swell Guys

NEW YORK. Congratulations on the most attractive December issue! Your front cover gives much deserved recognition to four swell guys in the safety field.

My secretary made some flattering remarks about the magazine, and commented that she is keeping a copy in her desk for future reference. I asked her how come and she told me there were a lot of "goodies" in the issue that she might want to refer to later.

—RUSSEL DE REAMER, *Consultant, Personnel Practices, General Electric Co.*

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ROBERT S. STEVENSON

Portrait by Fabian Bachrach

"At Allis-Chalmers we believe that we can do our fellow-employees no greater favor than to recommend that they invest in a 'nest-egg' fund of U.S. Savings Bonds.

"While this program has been going on for many years—made easy through the Payroll Savings Plan—we recently offered all Allis-Chalmers people a chance to review their individual bond purchasing schedules and to bring them up to date.

"As a result, more than 52% of the total Allis-Chalmers organization of about 40,000 people are buying U.S. Savings Bonds at a rate of approximately $6,000,000 a year."

ROBERT S. STEVENSON, *President*
Allis-Chalmers Manufacturing Company

Start your employees on the path of future financial security through automatic savings in the new and improved Series E Savings Bonds. It's simplicity itself. Just contact your State Director, U.S. Savings Bonds Division. He'll provide all the material and assistance you need to install a Payroll Savings Plan or build enrollment in one already existing. Look him up in the phone book or write for full information to the U.S. Savings Bonds Division, Treasury Department, Washington, D.C.

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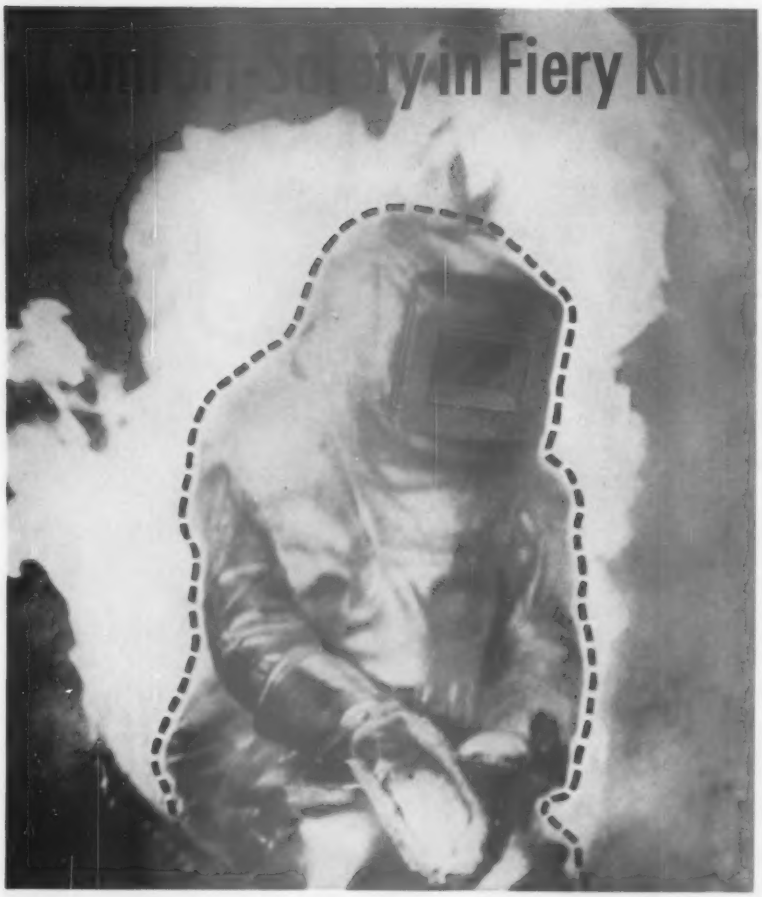
NATIONAL SAFETY COUNCIL

TODAY—PAYROLL SAVINGS ENROLLMENT IS AT A NEW PEACETIME PEAK!



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Circle Item No. 44—Reader Service Card

Creve Coeur Council

—From page 86

conducted during March, April, and May. Mr. Hanson has planned programs to include driving and bicycle safety and other projects beamed so Scouts can carry out the worth-while ventures.

From June through August, attention will turn to outdoor safety with emphasis on swimming instruction courses, firearms safety, small craft safety and fire safety outdoors. These projects will be directed by Doug Proctor, executive secretary of the Peoria Chapter, American Red Cross.

Safety in the home will be the target from September through November, and it will be promoted through the home and school committee whose chairman is Bob Jamieson, president and member of the executive committee of the Peoria School Board. The Scouts will conduct safety inspections in homes, complete check lists, and suggest certain home safety precautions.

Tied in with the home and school committee is the industrial and civic committee, headed by Ed Stoetzel, executive secretary of the Peoria Manufacturers Association. This committee's main function will be to promote Scout visits to industrial companies in the six-county area. The Scouts will inspect dairies, manufacturing plants, bakeries, and the like, to observe safety practices and submit a report to the council. They will also visit Peoria City Council meetings and report their observations to the city's legislative group.

In October, the Creve Coeur Council boys will join ranks with 40 million American Boy Scouts to distribute a family "Be Prepared" plan booklet.

Meantime, officials of the Creve Coeur Council group feel that the most effective way to formulate safety ideas in the minds of thousands of people in the Council area is to "be prepared"—be prepared to impart safe thinking and practices in the minds and hearts of the Scouts so the boys and thousands of community people will have a better chance to "live for tomorrow."

Crusaders in Skirts

—*From page 25*

believe that our people share this information with their families and friends.

But this safe driving crusade is unique in the sense that it changes a potential back seat driver into a convincing safety influence—a co-pilot. There are more than 31,000 women in the Traffic Department of the New York Telephone Company and that's a powerful lot of influence when properly directed—either in the back seat or the front.

Listen for a moment, if you will, to a bit from the *Crusade Leader's Guide*. After pointing out to the girl the many roles that she can play to promote safe driving, the *Guide* notes:

"Avoid tensions, irritations—these can be translated into an accident behind the wheel of a car. Don't start a discussion at the breakfast table which you know may become heated. Let your husband drive off to work in a happy frame of mind and hold the fire for some other time.

"Don't get your family all fidgety and nervous by always being late to get started for church, the movies or shopping.

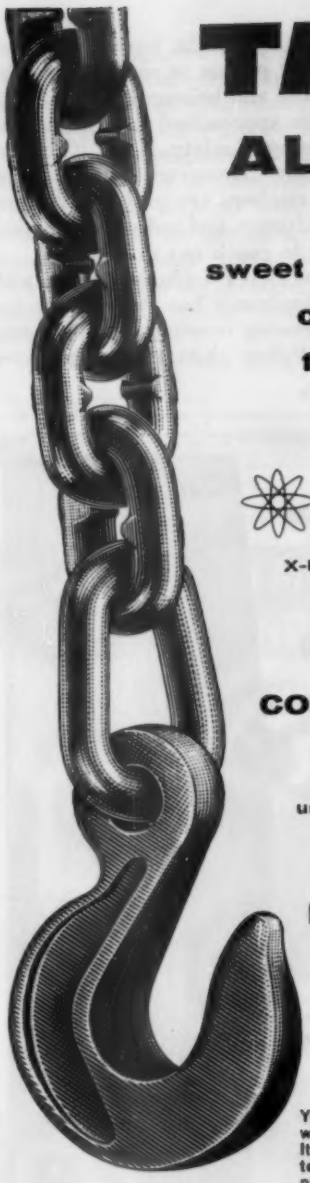
"Don't keep your boy friend waiting 'just for effect'; he may become annoyed, rather than impressed, and if he takes his anger out on the car almost anything can happen."

Women can be a tremendous force for good when they are aroused. Haven't you seen a group of mothers prove to the town fathers that a street light is needed at an intersection? Pretty soon a traffic light is installed. They won their point through united action.

What is our responsibility if we women are to do something in the field of safety? The problem is immense and intricate. There are sociological, physiological, economic and political aspects all wrapped up together. And the American woman can effectively tackle all aspects at once. But how?

First, let us consider our obligations and responsibilities in the home.

Are mothers devoting proper



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care and thought to safety training for their children? Have some lost the respect of their children and abandoned all effort to guide and control them? The home is the heart of our lives and the wife and mother should be the heart of the home. Here, through courtesy, kindness, consideration, tact and untiring diligence we have our best opportunity to develop safety-minded citizens. Safety by example and training is needed here.

The housewife, however, is the hardest person to reach. If she is a joiner and belongs to a club, she can be approached and taught the meaning of safety. If not, it's more difficult. However, many wives and mothers are married to men in industry, and industry is beginning to reach out to them.

The Bell Telephone Company of Pennsylvania has started a series of evening meetings for the family. Safety skits, motion pictures and talks are part of the program. Children, husbands and wives attend. Home and traffic safety are discussed. Even to teaching the youngsters how to roller skate safely.

My own company, the New York Telephone Company, is about to launch a safety essay contest for children between the ages of nine and 13. The subject is to be "What My Mother or Father, or Both, Are Doing to Prevent Accidents." This is another means of reaching into the home—another way to get the wife and mother thinking about safety.

After the home, the next great training field for youth is, of course, the school. Women as teachers can exert great influence for safety in our schools. Furthermore, through our participation in Parent-Teacher and other civic organizations, we can provide assistance in the schools for appropriate safety education.

In Phoenix, Ariz., there is an effective program which, I understand, is spreading elsewhere in our country. Children in elementary school are taught how to drive. The schoolyard is marked off to simulate a city street or highway. Small pedal cars are used for instruction. Boys and girls learn to recognize and observe universal signals and signs. This is most effective: it reaches not only the child, but also many parents who attend these training meetings. This type of training is invaluable and women could be instrumental in making it available all over the country.

What about the slaughter on our highways? If we have any desire to protect our loved ones and any compassion for suffering, women should act here! And we have plenty of tools—tact, charm, ingenuity and authority to force our friends and loved ones to protect themselves.

In this field, club women have contributed a great deal. An example, my own club, the Altrusa International's public affairs program is directed to four major areas of concern. Traffic safety is first in order, with emphasis on three individual goals: to be a safe driver, to promote safe driving,

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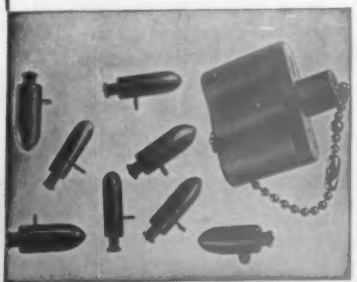

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and to be a law-abiding pedestrian. The last item is of particular importance. Did you know that another word has been added to our vocabulary in recent years, "pedestricide?"

As a result of Altrusa's forward-looking public affairs program, many of our clubs over the country have been contributing toward safety in the community. In Oregon, February was designated as traffic safety month and the Portland Altrusa Club promoted safety on a state-wide basis.

There's more to our crusade. A series of 12 safety posters were developed. Leaflets associated with these posters are distributed by safety committees to employees on the job. One and all are urged to plug safe driving at picnics, ball games, dances, bridge parties, and in their civic organizations, churches and clubs.

We are sure that we are going to get as much safe-driving mileage out of our fathers and sons, nephews and uncles and, incidentally, ourselves, as courtesy and friendly persuasion will allow.

This brings me to a very sizable and accessible group of women—the women who work. There are more than 22 million women employed full-time in the United States today holding one-third of all the jobs in the country.

The growing importance of women in industry is indicated by the fact that the number of working women has increased about 57 per cent since 1940 while, during the same period, the male working population increased only about 12 per cent. The days when the song, "Heaven Will Protect the Working Girl," really meant something are over.

Numerically, the working woman is becoming a dominant factor in industry, an important manpower reserve. In the area of industrial safety, women are today an important factor. Are we taking full advantage of this kind of safety interest and motivation?

There are probably many people who believe that the type of work women do is not hazardous; therefore, women do not require the same degree of safety education as men. In the Bell System a few years ago, we were rudely jolted by the discovery that lost-time on-duty accidents among our women employees were running at twice the frequency of male mishaps. A plan of co-education was instituted with no lessening of emphasis in its application to women, and today there is no such disparity in the accident frequency records of our men and women.

We have found our telephone women very receptive to fundamental safety suggestions such as, care on stairs, closing file drawers, opening doors carefully, and the like. We believe that specific suggestions on how to be safe on the job are much more effective than overall slogans and exhortations.

The average woman in industry is not terribly concerned over office or department safety records in which she is nothing but

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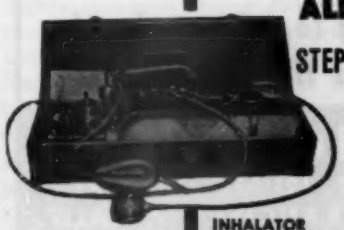

INHALATOR
ASPIRATOR
RESUSCITATOR
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a statistic. She may experience a vague sort of pride to learn that her company has earned a safety award. She is not likely to be too conscious of her part in winning such an award. The American working girl is a pretty realistic sort of person, a far cry from her ancestors of the smelling salts era. And I believe that she responds best to a safety approach that subordinates company banners and records and brings the matter to her as an individual.

I think the average working woman will react readily to the type of safety education which touches upon the unpleasant consequences of carelessness on the job or at home. Safety takes on a new meaning when its absence is associated with discomfort, disability—loss of earning power, yes, even loss of dignity.

One of my own girls asked me with eyes flashing if I'd forgotten what the gals in my own department are doing, and I quote: "Monthly safety meetings, films, posters, pamphlets, discussions of ways and means to keep everyone alerted to the danger and harm that could affect us. The appointment of a 'safety observer' to act for a month at a time to watch and prevent accidents in the office. The final result—the development of a 'safety-eye' for hazards."

That girl has religion. She believes in the program. She practices it on the job and at home. There are 22 million like her that can be reached in industry today.

Her use of the term "safety-eye" struck me very forcibly. With a "safety-eye" all women would indeed become "guardians of safety" for themselves and their families. They'd see the rubbish in the cellar, the toys and packages on the staircase, the flammable cleaning fluids in the kitchen. They'd see the danger of a hurried breakfast and a dash to the railroad station. They'd try to control the driving of foolish teenagers. They'd train their families to keep a "safety-eye" open in do-it-yourself projects, in highway travel, in sports—in all daily living.

I firmly believe that we women can do a tremendous job in public and family safety education. We have the motivation in our basic instincts. We have the numbers to reach millions of people.

I have expressed my firm belief that there is a force that can be put to work for safety. Its effects are scattered now but could be drawn together in one great movement. Women have the time, and the talent, and the cause is of transcending importance.

It's up to you men to realize this, to understand that we can work side by side with you. It's up to you to mobilize this force and to call upon us to really do a job, a united job, in the safety field.

Salesman: "All you do is make a small deposit, then you pay no more for six months."

Lady at door: "Who told you about us?"

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Circle Item No. 56—Reader Service Card

WHAT'S NEW IN NATIONAL SAFETY COUNCIL SERVICES *

Keep It Clean!

You don't need a fortuneteller to inform you that you're asking for trouble if you ignore good housekeeping in the factory.

Neither does it take a crystal ball to reveal that good housekeeping makes work easier, smoother and quicker.

Your Future . . . Keep It Clean is the title of a colorful new publication which concentrates on housekeeping in the factory.

For example, it advises: keep extension cords overhead, keep aisles, floors and stairs clear of booby-traps, and put oily rags, trash and scraps where they won't breed fires.

Good housekeeping is a necessity outdoors, too, the pamphlet points out. Outdoors, keep fires small, start them only in covered burners, and keep water and an extinguisher handy.

Ignoring a Friend?

Common Sense is the cartoon subject of a new publication, *We Know Better.*

The multicolor pamphlet points out that most workers know their jobs, have experience, and don't want to hurt others or themselves. But they often ignore their good friend, Common Sense.

Further, workers know how accidents are caused, yet they fail to report unsafe work conditions, wear the proper clothes or use the right equipment for a job.

Likewise, they fail to report unsafe acts—fixing machinery while it's running, for example—when they see them.

"Don't be half safe," the pamphlet advises. "Do it safely!"

Operation Safety

THE NATIONAL "Back the Attack" push to make 1958 a decisive year for traffic safety will be given added impetus in February when state and local traffic officials, safety councils, public support groups, civic agencies, railroads and industry join to encourage recognition and strict observance of the basic traffic signs, signals and pavement markings.

The National Safety Council's Signs of Life program, which is highlighted as the Operation Safety emphasis theme for February, is a year-round program conducted primarily to inform motorists and pedestrians of the meaning of highway signs, signals and pavement markings, and to encourage public support of a program of maintenance, modernization and standardization. Obedience of railroad crossing signs and signals is particularly stressed.

Almost all violations involve situations for which signs and devices have been developed to regulate traffic and safeguard motorists.

—Three out of 10 drivers involved in fatal accidents exceeded speed limits or safe speeds.

—One out of 10 failed to keep to the right of the center line.

—One out of 10 did not have the right of way or passed improperly.

—One out of 20 disregarded "STOP" or warning signs.

The remedy for accidents resulting from disregard of traffic signs, signals and pavement markings is simple—knowledge of the Signs of Life and obedience to them—and stronger enforcement action by police and courts.

But getting the public to apply the remedy is not so simple. A continuing public education program must therefore be conducted. You can help by offering your services to local safety leaders and traffic officials. Have Signs of Life leaflets, posters and other materials ready for distribution. Let your employees know about the program and ask them to

—To page 126

* Look to this page each month for latest news about NSC services. Address request for additional information, samples or prices to the Membership Department.

For a More Successful Poster Program

POSTER program aids miniatured on this and the following pages are NEW — shown here for the first time. Those illustrated in one color are actually printed in two or more colors.

Also, be sure to refer to the new 1958 directory section of occupational posters (December 1957 issue, National Safety News) which contains an excellent selection of 756 posters on a greater variety of subjects.

JUMBO POSTER FOR MARCH 1958

The Jumbo poster, issued monthly, is designed for outdoor use and is available to members on annual subscription but is not stocked. Its actual size is 9' 11" by 11' 8".

SAFETY BANNER FOR MARCH, 1958

Here is the attention-getting, monthly cloth banner. Available in two types—indoor and outdoor—both are identical in size (10 feet long by 40 inches high), have the same general message and multi-color design. Indoor type is of sturdy drill with grommets for easy hanging, while the outdoor banner is of extra heavy drill, with wind vents, and has strong stitched-in rope for durability.

©NATIONAL SAFETY COUNCIL

1168-A 8½x11½

This new four color poster is illustrative of the 72 four color posters shown in the 1958 Poster Directory.

Posters below are printed in two or more colors

(Available only in sizes indicated)

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Electrotypes of payroll inserts can be furnished in all poster illustrations shown above.

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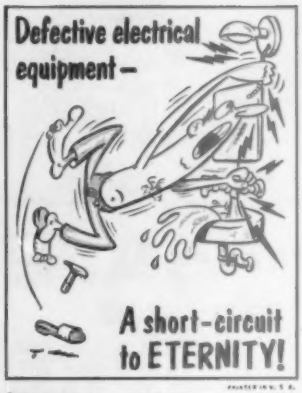

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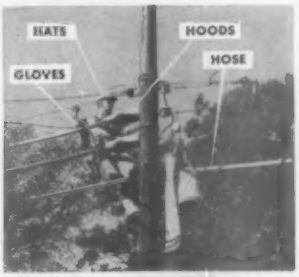

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USE THEM!

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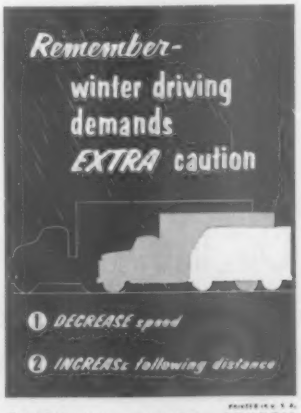

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Electrotypes of payroll inserts can be furnished in all poster illustrations shown above.

Wire from Washington

—From page 17

Highway Safety. The safety aspects of the highway construction program continue to be stressed by federal officials. The Commissioner of Public Roads expressed the hope that the highway safety study of on-the-scene investigations of traffic accidents and driver behavior "will uncover many new clues to accident prevention," and the Deputy Under Secretary of Labor said that "unless our highways are safer, our automobiles are safer, and our people are more careful, the outlook is indeed discouraging."

The Interstate Commerce Commission's investigation of possible violations of safety regulations by motor carriers has resulted in a recommendation by a hearing examiner that the ICC consider suspending or revoking the operating license of a major carrier unless the trucking concern corrects its alleged violations of safety rules within a year. The violations relate to driver qualifications, maximum hours of service and standards for operation and equipment.

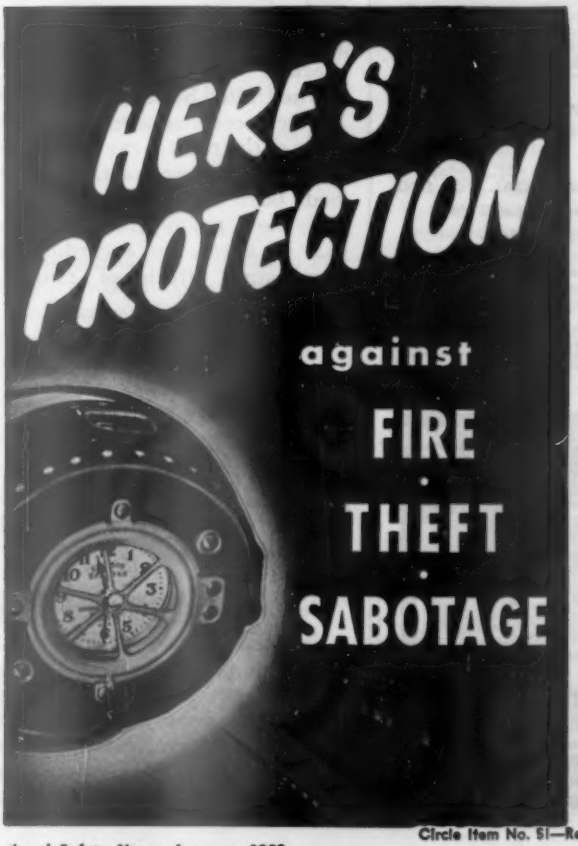
The governor of Tennessee proposed the creation of a National Traffic Safety Academy operated by the FBI, which would engage in a technical traffic safety training program for representatives of states, municipalities, and counties.

Aviation Safety. The Civil Aeronautics Board issued various notices of proposed rule making. It proposes to make applicable to operations outside the continental United States and to irregular and off-route carriers the rules now applicable to domestic air carriers that no airplanes shall take off when frost, snow or ice is adhering to the wings, control surfaces, or propellers of the plane. It also proposes to relax somewhat the requirements of pilots in command in connection with the amount of previous recent experience with the particular aircraft being flown. The CAB also announced its 1957 annual review of the air-worthiness regulations.

The CAA announced opening up the continental United States air space about 24,000 feet to voluntary CAA traffic control service in clear weather. Previously the CAA offered such service only on designated federal airways and in the vicinity of some major terminals.

Marine Safety. At the request of the Bureau of the Budget, the Department of Commerce instituted a study as to whether or not the government should impose charges for the use of federally provided navigation facilities on inland waterways. This proposal grows out of a recommendation made by the Hoover Commission's Report on Water Resources and Power, which recommended that the Interstate Commerce Commission fix such charges.

Labor. The United States Department of Labor issued a new *Union Safety Guide*, providing



CHICAGO
Watchclock System
"The first . . . and still the first."
LOWERS YOUR INSURANCE RATES!

It keeps track of your watchman's tracks—so accurately and positively that the CHICAGO WATCHCLOCK System is approved by THE UNDERWRITERS' LABORATORIES and by THE FACTORY MUTUALS LABORATORIES. Users earn reduced insurance rates. Thus the CHICAGO WATCHCLOCK System quickly returns its small cost to you.

Write for FREE new folder that completely describes this simple, low-cost, tamper-proof system of extra protection to property. Write for it NOW!

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DIV. GREAT LAKES INDUSTRIES, INC.
1524 S. WABASH AVE., CHICAGO 5, ILL.
OFFICES IN PRINCIPAL CITIES

Circle Item No. 51—Reader Service Card

information on the organization of union safety activities. The *Guide* urges labor to take leadership in the accident prevention program and states that "what is needed is a safety program in every union local and every work establishment, for every job in the country."

The National Labor Relations Board rendered a decision in an unfair labor practice case, in which safety was the major determining factor. The employer maintained a fleet of trucks and autos to test tires and gas. Its drivers were required to make certain stops, during which the greater portion of the time was to be used by the drivers as they pleased; they were paid for this "stop" time.

The employer promulgated and enforced a rule forbidding union membership solicitation by its employees during their paid non-working time at scheduled or required stops. This rule was justified by the employer on the ground of safety, in that the stops should be used for purposes of rest.

The NLRB ruled against the employer. "Safety of operation," it said, "is a legitimate concern of an employer, and may, under some circumstances, justify the promulgation of rules which would infringe upon the normal exercise of rights of self-organization." But here the NLRB found "the evidence insufficient to establish that the effect of non-application of the no-solicitation rule to the driver's rest stop is in fact to increase the hazardous nature of the work involved."

Public Health. The Department of Agriculture issued a notice of proposed rule making in connection with regulations governing the inspection of poultry and poultry products under the Poultry Products Inspection Act (see "Wire," October 1956). Inspection will become mandatory on January 1, 1959, and voluntary after January 1, 1958. In addition, the Department is considering the inclusion in the regulations of a combined inspection and grade mark.

The United States Public Health Service recommended discontinuance of the mass x-ray method for detecting tuberculosis, which it had been espousing for years. This new policy grows, in part, out of a concern regarding the cumulative effects of radiation exposure.

Circle Item No. 52—Reader Service Card

MODEL #440

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Soft Vinyl COVER GOGGLES

***Lens is held firmly** in place by strong metal lock bar. Annealed end piece on the lock bar can be lifted with a fingertip for quick, easy lens replacement.

MODEL #440 provides all-around protection against heavy-impact, chemical splash, dust, sparks or molten metal. Soft vinyl frame form-fits any shape face. #440 is large size which fits over any prescription glasses.

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232 West Exchange Street
Providence 3, R. I.

Quality Eye Protective Equipment — Made by the Leaders in Plastics

Circle Item No. 53—Reader Service Card

Respiratory Emergencies

—From page 27

mucus and blood from nose and mouth, along with masks, cushions, and airways, is included.

Treating Respiratory Failure

In treating respiratory failure, good equipment is only half the requirement, since any apparatus is only as good as its operator. Non-medical personnel—whether they be fellow workers or members of a safety or first-aid crew

—are usually the first on the scene at a time when the first five or six minutes may determine success or failure. Operators of the resuscitator, therefore, must be taught all aspects of the art of resuscitation.

They should have a simplified understanding of normal physiology of breathing and what the machine is designed to accomplish. Signs as manifested by changes in the patient and by the operation of the apparatus must be explained and instructions given as to their management. It is also essential that operators be trained to prepare the patient—proper positioning, removal of foreign material from oro-nasal passages, maintaining body heat.

Proper placement of the airway (see Figure 4) should be emphasized, with specific instructions as to when to use it and when to remove it. There are many "do's" and "don'ts" in applying a mask and retaining it on the face (see Figure 5).

Preparation for treating respiratory complications requires a plan of action, good equipment, and well-trained personnel. Such a program is excellent insurance at all times and, in emergencies, will enable you to save human life.

Diary

—*From page 36*

curious blending of strength and humility which will let me attempt greatly for good and, at the same time, know fully my inability to do anything good unaided.

I would like to think that I could bring, 12 months from now, my work to a sort of altar as an offering to my God, a gift of service and truth, of life, of health, of diminished pain and increased happiness for men, presented as a sacrifice to the God from whom comes every gift of life, including life itself.

Yet I know (no matter how often I forget it in the heat of work and in the chill of pride) that I cannot bring any sacrifice to Him unless I come to Him first for the means to make me a useful instrument of His purpose.

So, the last resolution is to seek from the source of all truth the power to become a servant of that truth. And this, in the end, becomes not resolution but prayer!

New Home Designs Labeled Fire Traps

IN THE EVENT of fire, it would take an acrobat to get out of many of the homes being built today, a fire protection authority told the Fall Conference of the National Fire Protection Association at the John Marshall Hotel in Richmond, Va.

Percy Bugbee, NFPA general manager, said that "many so-called modern designs of dwellings have greatly increased the life hazard to occupants from fires."

He described as particularly dangerous the "tendency towards removal of certain doors and ceiling-height partitions in the dwelling and the tendency to provide small and high windows in bedrooms from which it would be impossible to escape in the event of fire."

Circle Item No. 54—Reader Service Card

..it's Halsey Taylor for new plant of Johnson & Johnson

Johnson & Johnson Eastern Surgical Dressings Plant, North Brunswick, N.J.
Plaster Mill • Offices (left) Mill (right)
Walter Kidde Constructors, Inc., New York and Houston
ENGINEERS AND BUILDERS

There are three major inter-connected buildings on a 300-acre tract, numerous trees having been retained to add to the beauty of the site. It goes without saying that the interior appointments are in keeping with the smart, modern exteriors, among them being thirty Halsey Taylor coolers of type shown.

The Halsey W. Taylor Co., Warren, Ohio

View of Maintenance Wing, finished with blue enamel steel cover plates and white trim, with red tile brick wall.

fountains · coolers by Halsey Taylor

87

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With Johnson All Rubber Ankle Action Dielectric Ladder Shoes. The Choice of Ladder Climbers in all parts of the world.

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WORK SAFELY ALL-WAYS

FOR STEP LADDERS

Our Step Ladder Shoes are popular with maintenance men in homes, office buildings, schools, hospitals and etc. Dealers in all principal cities. Ask your Safety Supply Dealer or send direct. Your order will be shipped promptly.

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GOGGLE
ANTI-FOGGING AND
CLEANING STATION

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NO MAINTENANCE COST
NO REFILLS TO BUY

When Tissues and Solution are exhausted, dispose of entire Station and put up another low priced station in seconds.

SAVES YOUR PLANT TIME, WORK, MONEY

$1.50 each station
$1.35 ea., 1-3 cartons (12 stations to the carton)
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1007 Washington Ave., St. Louis, Mo., CHestnut 1-9393

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Circle Item No. 56—Reader Service Card

Mr. Bugbee said that the greatest challenge by far to fire preventionists today is the great numbers of fires in small one and two-family dwellings which are caused by simple and very well-understood hazards. He listed as most common the thoughtless disposal of matches and cigarettes, overloaded or defective electrical wiring, overheated stoves and furnaces, and needless accumulations of rubbish.

He blamed home fires for the majority of this country's fire deaths and fire injuries. He said also that "of the estimated 825,000 building fires in this country last year, 573,000 were dwelling fires."

Consultation Corner

—*From page 52*

reissued. However, they should not be sent to commercial laundries.

Two lockers should be maintained, one for street clothing and one for contaminated work clothing. The two should never be mixed, and workmen should take a thorough shower before donning street clothes.

Smoking areas somewhat removed from the machining operations should be designated and no smoking or eating should be allowed near the lathes. If at all possible, a shower and change to street clothes is recommended before lunch periods.

Periodic radiation surveys and air surveys should be made of the machining operation. Air dust levels should not exceed 70 alpha disintegrations per minute per cubic meter of the air sampled.

Film badges are recommended so that a permanent record of the beta dosage may be obtained. Periodic urine samples should be taken and analyzed for uranium content to properly evaluate the amount of uranium being ingested. Sources of such monitoring devices will be furnished upon request.

Additional information on the safe handling of uranium may be obtained from the Argonne Laboratory, Lemont, Ill., or the Atomic Energy Commission, Oak Ridge, Tenn.

Circle Item No. 57—Reader Service Card

Self-Sticking Safety Signs

Unskilled help quickly puts up Brady Safety Signs—without nails, screws, or tools. They stick and stay stuck to any surface.

The signs you need are among the 500 different Brady Self-Sticking Accident Prevention Signs. Wordings, colors, and sizes are recommended and approved by ASA and NSC. Write for free samples and Catalog 145-D.

Self-Sticking Warning Stripes are applied fast — right off the roll. Stripes in 2 sealed-in plastic colors. Outlast paint. Write for free samples and Bulletin 143-A.

Fast delivery. Distributors in 150 cities.

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★ The Positive Ladder Safety Device

Locks AUTOMATICALLY & instantly-holds
Prevents death and injuries from falling.
Automatic: Positive. Will catch workman if he starts to fall even if unconscious.
Inexpensive. Easy to install. No upkeep. Clamps to any rung ladders, peg ladders, pole or frame. No welding or cutting.
Simple to operate: Requires no attention from climber.
Notched rail **hot dipped galvanized.** Entire equipment rust and corrosion proof.
Can be kept free of ice by applying heat inside carrier rail.
In use approx. 9 years. Approved by Safety Engineers and Govt. Agcys. throughout country.
"Patented. Manufactured only by"
SAFETY TOWER LADDER CO.
1024 Burbank Blvd., P.O. Box 1052
BURBANK, CALIFORNIA

Circle Item No. 58—Reader Service Card

Grand Slam

—*From page 31*

reposing on department heads' desks.

Eye Protection. Early in 1949 an eye protection program was installed which required all employees in the "hot zone" of the bottle house, where glass breakage is most prevalent, to wear safety glasses. This program was later expanded to include all employees using caustic soda and acids, where proper safety clothing and gloves also were furnished. Shortly after this, all maintenance employees were equipped with eye protection and required to use it.

Fire Brigade. The next step was to form a plant fire brigade. Nine teams of six men each were educated in methods of preventing and combating fires. After an eight-week course on company time, participants attended a demonstration by the Philadelphia Fire Department. On a large parking lot adjacent to the plant fires of all four types (A, B, C, and D) were built to determine the capability of the fire teams. City firemen were lavish in their praise of the course's success. A refresher course is conducted every second year.

Medical Service. Early in 1951, a change was made in the Medical Department. Dr. R. Ralph Bresler, eminent industrial physician, was retained and a new system of reporting and recording injuries was installed.

Working as a team, the medical director and the assistant safety director were better able to control minor injuries and to reduce many hazards previously overlooked. Employees were invited to report off-the-job injuries and to discuss problems pertaining to illness or disease with the doctor or nurse. This proved to be a big morale booster and helped in many ways to obtain better cooperation from employees.

Indoctrination. An excellent feature, introduced in 1951, was the safety indoctrination of new employees. Each spring the many seasonal employees hired for the busy summer months attend a presentation of 38 slide films with commentary by the safety director. The talk covers safe procedures on jobs throughout the plant. A simple written test makes sure the new men have assimilated the information. Each test paper is checked and employees are corrected where wrong.

At the end of this session a display of safety equipment is shown and the purpose for each item is explained. The group is then given a tour of the plant. This program has proved of great value and is still used as basic safety training.

In 1951 Safety Director Bill Hipp organized the Philadelphia Lager Beer Brewers' Association Safety Council, comprised of seven breweries in the area. Monthly meetings feature guest speakers, films, and plant accident discussions. These companies later joined the National Safety Council.

While a gradual reduction in

CHEMICAL ENGINEER OR CHEMIST

FOR POSITION OF

SAFETY DIRECTOR

Large Northern California Company has immediate opening for experienced Chemical Engineer or Chemist capable of assuming responsibility for placing in operation a comprehensive coordinated safety program involving research, development and manufacturing activities.

Must be experienced in assessment of chemical processes related to explosive materials. Familiarity with ordnance safety requirements, government contracts and formulation of safety policy and standard operating procedures helpful. Salary commensurate with qualifications.

for further information you are invited to send a complete resume of your training and experience to . . . Box 436

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425 N. Michigan Ave.
Chicago 11, Ill.

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WILL BE HELD IN CONFIDENCE

DUSTS?
CHECK THE ONES THAT PLAGUE YOUR OPERATION

- ☐ Aluminum
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- ☐ Coal
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Circle Item No. 60—Reader Service Card

PROTECT LIVES . . .
Guard Against Property Damage

M&M WHEEL RAIL CLAMPS

THE SAFE WAY

NOT THIS

For car stops, on loading platforms, temporary sidings, railroad ferries, under tipples, for cars on grades and traveling cranes.

Used and recommended by leading Steel Companies, Manufacturing Plants, Mines, Grain Elevators, Cement Plants and Quarries.

WRITE FOR BULLETIN NO. 34

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CIGARS-CIGARETTES-MATCHES
immediately extinguished...
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Fire hazards from smoking are a problem everywhere.

Stop fires before they start . . . with SIPCO DUNKING STATIONS. Heavy CAST ALUMINUM CANISTERS — guaranteed three years against breakage. Partly filled with water, they drown the "smoke" and solve the sanitation problem. Lift off the canister — flip back the lid — dump it and the cleaning job is done!

Available in over a dozen different models. STANDARD and JUMBO sizes — with either black crinkle or brightly polished DELUXE finish to suit your own requirements.

Unit No. 1J—JUMBO floor model with heavy weighted base and attractive, eye catching metal sign. Height 42". Wt. 26 lbs. ALSO AVAILABLE . . .

A DELUXE FLOOR MODEL, LESS SIGN AND DECAL, for hospitals, waiting rooms, offices, restaurants, stores, etc.

Unit No. 2J—JUMBO canister and sign. For mounting on walls, posts, columns or machines. Wt. 6 lbs.

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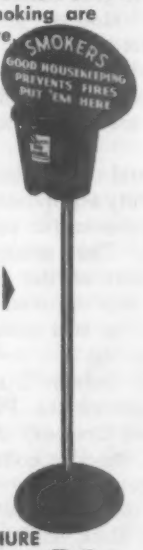

WRITE FOR ILLUSTRATED BROCHURE

STANDARD INDUSTRIAL PRODUCTS CO.
DEPT. S • 920 N. GARFIELD AVE. • PEORIA, ILLINOIS

Circle Item No. 61—Reader Service Card

injuries had been noted over a period of years, a sharp reduction took place in 1951, with only nine disabling injuries recorded, with a frequency of 6.64. That year marked the beginning of many national and local awards presented by the National Safety Council, the United States Brewers' Foundation, and others. The same year the company initiated an annual safety banquet at which the accident prevention honors won by employees are presented by representatives of national organizations before top management, supervision, safety committees, and guests.

Two years later, in 1953, the company received the National Safety Council's Award of Honor for reduction of injuries and Bill Mulvenna was promoted to the head of the department as safety director.

Publications. Despite the fact that a safety column appears in each issue of the monthly employee publication, *The Case*, Mulvenna felt he was not getting close enough to the employees. So, with management's approval, *Schmidt's Safety Scoops* was founded in 1953. With it the safety director keeps employees posted monthly on the safety program. Articles cover hazards within the plant, means of averting possible injury, and off-the-job hints, including safety at home, traffic reminders, vacation safety, etc.

The publication, which is mailed to employees' homes, has been well received, not only by employees' families, but also by other industrial safety engineers, who have reprinted *Safety Scoops* articles in their own company magazines.

Safety Material. In 1953, the company began mailing the National Safety Council's safety calendar to each employee's home. A contest, based on limericks printed on the calendar, was started on a company basis, with three prizes being awarded monthly. Many employees also enter the Council's contest based on the same limericks. This was not only another reminder to

work safely, but a means of getting safety into the home.

Over the years material from the National Safety Council has been used to good advantage. Included are *Industrial Supervisor* (to all supervision), NATIONAL SAFETY NEWS (to all department heads), *Safe Driver* (truck and passenger car editions, mailed to homes), *Safe Worker* (distributed at plant), and safety calendars (imprinted with company name).

Bulletin boards are prominently placed throughout the plant, with posters, safety notices, reports on frequency and severity rates, etc.

Results. A gradual reduction of injuries continued, culminating in a perfect record for 1955. Between July 1, 1954 and March 2, 1956, employees worked a total of 3,148,643¼ man-hours without a disabling injury. This record was broken when a man slipped on a wet floor and broke a leg.

Starting again on April 3, 1956 and ending June 19, 1957, employees worked 2,136,523 man-hours without a disabling injury.

From a frequency of 33.20 in 1946, when recording of injuries began, the program reached its peak with a frequency of zero in 1955.

Since 1951 the company has won three Awards of Honor and four Awards of Merit from the National Safety Council and three first-place, two second-place, and one third-place awards from the United States Brewers' Foundation.

"Credit for this success," says Bill Mulvenna, "must go to the people who worked so hard to attain it: top management, for backing the program 100 per cent; the men who directed the program; the safety committees for their unfailing efforts, and the employees, for their unselfish cooperation."

Nothing deteriorates a car as fast as a neighbor's buying a new one.

Beware of a half-truth; you may have hold of the wrong half.

Circle Item No. 62—Reader Service Card

Stop dangerous handling of INDUSTRIAL LIQUIDS

You can stop dangerous handling of liquids with Tokheim high vacuum pumps. Their use in maintenance work will help prevent spilling, slopping, over-filling and dripping—all enemies of safety. This means your plant can be kept cleaner—work is speeded—waste halted—accidents prevented.

Tokheims are available with hose or spout outlets and other optional attachments. Pump operates on both forward and back strokes—delivers 20 gallons a minute. Will pump 'most anything that pours. Offered with alternate parts to handle special liquids.

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Powdered Soap
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A Specialized Soap for Every Type of Plant Requirement!

Whether for light, heavy or extra heavy duty, for general plant or office use, or to solve specific cleansing problems, our more than 40 years of experience in serving industry is at your service. *Your inquiries will receive prompt and intelligent attention!*

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Circle Item No. 63—Reader Service Card

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MATERIAL
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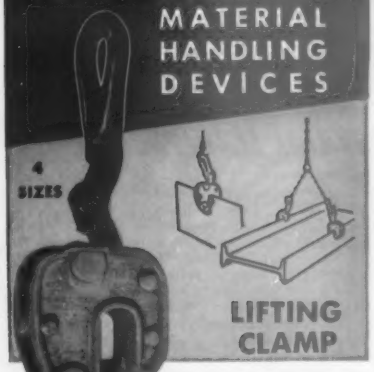

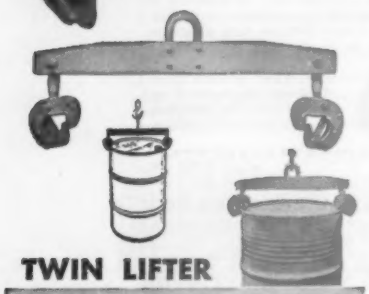

For Interesting Information write

MERRILL BROTHERS

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3-R-6

Circle Item No. 64—Reader Service Card

Free Gloves Promote Safety in Coal Mines

STARTING WITH the last quarter of 1957, the Hudson Coal Company, Scranton, Pa., gives a pair of gloves to each employee in a mine section that works at least two months without a lost-time accident. The gloves are of a superior grade that will give good service, but their principal value is an indication that every man who receives a pair is a member of a team that has worked together to prevent injuries.

The rules, which make it possible to win a free pair of gloves every month, are as follows:

—The colliery superintendent clearly designates the section within the mines under his supervision. In general, a section will be that part of the mine assigned to a day shift sectional foreman.

—All inside men who work in a section, regardless of their shift's starting and finishing times, will be eligible for the "gloves for safety" award.

—Men who change from one section to another during the competition are considered with the section in which they worked the greatest number of days during the period.

—Gloves are given to each workman in a section that completes two months without a lost-time accident.

—Each man receives another pair of gloves when his section completes a third consecutive month without a lost-time accident and for each consecutive month after that. However, when a lost-time accident occurs, that section must again complete two accident-free months before becoming eligible for the award again.

—If a lost-time accident is reported in a section in any month, no workman in that section is eligible to receive a pair of gloves for that month.

—As soon as possible after the end of each month, the colliery clerk notifies the Safety Department of the section(s) eligible for the award and of the number of men in such section(s).

The Safest **LIFE JACKET** *made*

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Face-up ACTION

PERFECT FOR:
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and for all
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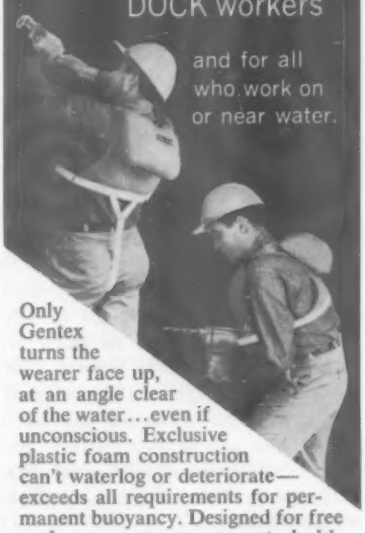
or near water.



Only Gentex turns the wearer face up, at an angle clear of the water...even if unconscious. Exclusive plastic foam construction can't waterlog or deteriorate—exceeds all requirements for permanent buoyancy. Designed for free and easy arm movement, holds securely in place with adjustable straps. Withstands hard use, needs no special care, can be washed or dry-cleaned.

GENTEX GENERAL TEXTILE MILLS, INC.
450 Seventh Ave. Dept. T1
New York 1, N. Y.
EXPORT DIVISION: GENTEX INTERNATIONAL, INC.
450 Seventh Ave., N. Y. 1, N. Y.

Circle Item No. 65—Reader Service Card

Leading industrial doctors advise immediate washing with plenty of running water as the best first aid treatment for any chemical in the eyes. Records prove that washing with water for ten minutes or more, close to the accident, is necessary to reduce or eliminate eye damage.

Forehead operation leaves hands free to open eyelids so water can be directed wherever chemicals might be lodged. Sanitary white baked enamel bowl is resistant to most fumes.

Over 500 industrial plant installations have been made to date.

Write For Details.

VALVE
Chain Operated
Quick Action
Self-Closing

NEW EMERGENCY SHOWER

The B & A Shower is the quickest and most satisfactory way to saturate a worker with gallons of water the instant an accident occurs, to prevent a disfiguring burn—even a fatality.

Special shower head, no holes to clog—can be used where unfiltered water prevails.

Write For Details.

GLASS SLIVERS AND CHEMICAL IN EYES!
DISFIGURING FACIAL CUTS AND BURNS!
CUTS AND CHEMICAL BURNS ON ARMS AND BODY!
THIS HAPPENS WHEN UNPROTECTED GLASS BOTTLES ARE BUMPED

NEW LOW COST B & A SAF-T-BAGS

are widely used for the safe handling of glass bottles containing harmful chemicals; also the storage and recovery of expensive serums, biologicals, and other costly products.

Painful cuts, disfiguring burns, loss of eyesight, or even a fatality, do result from corrosive liquid splash and flying glass when unprotected bottles shatter.

Write For Details.

5 PINT
1 GALLON
5 GALLON

BENSON & ASSOCIATES, INC.

P. O. Box 7342, Dept. N.S., Chicago 80, Ill.

Circle Item No. 66—Reader Service Card

Test Floor Finishes by "Black Light" Analysis

A new technique for analyzing and evaluating floor finishes that enables both floor finish manufacturers and industrial maintenance executives to improve their floor service method and testing programs has been announced by Vestal Laboratories.

This new technique is based on fluorescent ("black light") analysis which makes floor films actually visible. The qualities of leveling, water resistance, multi-coat applications, removal and wear resistance are dramatically revealed. A presentation of fluorescent analysis was sponsored by Vestal at the recent Sanitation Maintenance Show in Chicago.

Here's a brief description of the procedure:

A soluble fluorescent dye is dissolved in the water emulsion. The floor finish is applied to a test panel or test floor. The dry film, when observed under near-ultraviolet radiation ("black light") becomes visible by its orange-colored fluorescence.

Evaluation of film properties is made as follows:

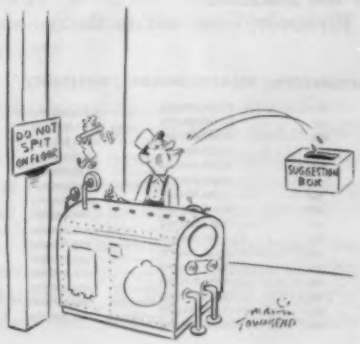
1. **Excellent Leveling:** A uniform fluorescence over the entire test surface.

2. **Poor Leveling:** Alternating intense fluorescent streaks and weak fluorescent or bluish streaks.

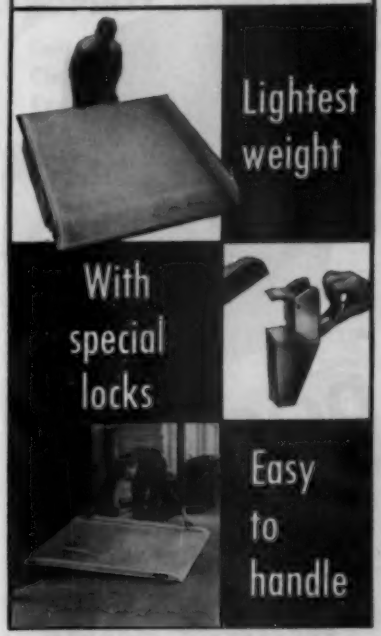
3. **Multi-coat Applications:** Increase in fluorescent intensity. Effect on previous applications can be observed.

4. **Water Resistance:** Fluorescent intensity is not diminished by application of drops of water or by damp mopping.

5. **Removal:** Fluorescence di-



Magcoa magnesium Dockboards



safest to use!

- Safety from strains—the lightest metal available
- Safety hand holds—no crushed fingers
- Safety from all board slippage with new locking device
- Safety curbs to prevent accidents
- Safety tread plate insures traction
- Safety engineered to your requirements

For full details use the coupon below.

MAGNESIUM COMPANY OF AMERICA Materials Handling Div.
magcoa East Chicago 4, Indiana
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☐ Please send special Dockboard File and news on new safety lock

Name and Title_____
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Address_____
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Circle Item No. 67—Reader Service Card

BUILT BETTER
FOR SAFETY
FOR COMFORT

M1250

DOCKSON
Helmets and
Handshields

Complete protection against sparks, flash and dangerous rays of arc welding. Federal specification plates. Light-weight, roomy, adjustable, comfortable headgear, spring pivot for positive holding, easy raising and lowering. One-piece, rivet-less formed fibre, built to last.

M1225

1275

1475

Write for distributor's name and our catalog of Head and Eye Safety Equipment.

1650

Dockson
CORPORATION
3839 WABASH • DETROIT 8, MICH.

Circle Item No. 68—Reader Service Card

minishes and disappears as film is removed by a floor finish remover.

6. **Wear:** Decreasing fluorescence in the middle of the test corridor relative to the higher and initial fluorescent intensity of the film, close to the walls where there has been little or no traffic. As wear increases, the middle of the test film will develop a definite wear path seen as a bluish color (reflection of the "blacklight" from the bare substrate). When the wear path becomes predominantly blue in color, the film is estimated as having been worn through to the substrate.

Acoustical Treatment

—*From page 23*

than the noisiest machine—that is the condition which absorbents can correct.

As their name implies, absorbents "absorb" or "soak up" sound. Like a blotter, however, they don't prevent passage of noise through them.

Now, what does all this mean to us? If you are closer to the noisy machine than to the acoustical absorption, you'll notice very little, if any, reduction in noise level. The direct sound from the machine reaches you before the reflected sound, so you'll get its full effect.

In the conical volume, there is little noise relief. The volume is a right angle cone with a base whose radius equals the ceiling height of the room. Anywhere in that cone, the noise level is not appreciably reduced by using absorbents on the ceiling. The volume of the cone can be reduced by lowering the ceiling or dropping the absorbents down nearer to the machine.

However, even within the cone

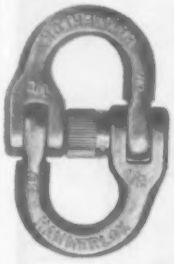
DECIBEL LEVEL	RELATIVE ENERGY	DIFFERENCE
105	31,630,000,000	6,310,000,000
104	25,120,000,000	5,170,000,000
103	19,950,000,000	4,160,000,000
102	15,890,000,000	3,360,000,000
101	12,590,000,000	2,590,000,000
100	10,000,000,000	2,057,000,000
99	7,943,000,000	1,633,000,000
98	6,310,000,000	1,299,000,000
97	5,013,000,000	1,031,000,000
96	3,981,000,000	818,000,000
95	3,163,000,000	651,000,000
94	2,512,000,000	517,000,000
93	1,995,000,000	412,000,000
92	1,585,000,000	326,000,000
91	1,259,000,000	259,000,000
90	1,000,000,000	

CM HERC-ALLOY®

...the original alloy steel chain

TO SERVE YOU BETTER: Herc-Alloy chain assemblies can now be ordered with either of two types of coupling links.

Herc-Alloy sling assembled with welded, heat treated alloy steel coupling link
TRADITIONAL
Herc-Alloy sling assembled with heat treated, alloy steel Hammerlock coupling link
NEW



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...the "do-it-yourself" reusable coupling link that enables you to assemble or rebuild your own Herc-Alloy sling chains with all components furnished by your local distributor.

CALL YOUR CM CHAIN DISTRIBUTOR or write for helpful literature on alloy chain assembly, care, use and inspection.

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CHAIN CORPORATION
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Regional Offices: New York • Chicago • Cleveland
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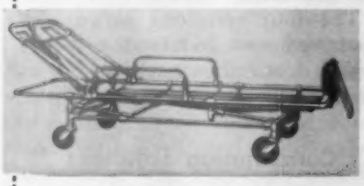
Circle Item No. 69—Reader Service Card

WASHINGTON
finest quality COTS and STRETCHERS for emergency use

• Washington's complete line of ambulance cots, stretchers, cot fasteners and other emergency equipment has featured the finest craftsmanship and highest quality in the industry, for over 33 years! First aid and rescue squads, fire departments, factory hospitals and first aid rooms have always depended on Washington for their complete needs. Washington "safety engineered" equipment is fully guaranteed—gives you the best for the same price as ordinary equipment.

MODEL 54-L ELEVATING COT—A Washington exclusive design. Elevates to near hospital bed height, yet lowers to only 9½" high! A perfect cot for vehicles with limited head room and overhead hanging stretchers. Here's all the advantages of an elevating cot— plus extra head room when lowered.



MODEL 52 ELEVATING COT—Another Washington exclusive. Elevates to home bed level, lowers to 12¾" high. A fine all-purpose cot that is absolutely safe—locks securely in raised position.

MODEL 18 FOLDING STRETCHER—Ruggedly constructed fold-away model gives strength with light weight. Folds to 4½" high, a real space saver, with easily adjustable back.

See your jobber or write for FREE catalog.

WASHINGTON Products Company
Washington Court House, Ohio

Circle Item No. 70—Reader Service Card

these results are accomplished:

1. Sounds become directional and identifiable, since they are not lost in a sea of confused, reverberant, reflected sounds.
2. Communication becomes easier.
3. Peak impulses are clipped and the sharp "sting" is taken out of the sound.

In offices or locations where noise levels are under about 80 db., the reduction accomplished by absorption is usually appreciable and appreciated. In areas of 100 db. or more, the effect is rarely enough to solve the problem and the end results may be disappointing, even though the condition is very much improved. Here's what it looks like in numbers.

At 105 db., the relative energy is over 30 billion units. To drop down one single decibel is to remove over six-billion units. In other words, the difference in level between 104 db. and 105 db. is more than all the energy at 98 db.

So we can do a remarkable job in soaking up energy with absorbents, but still end up with a noisy room. That's the trouble with humans—they react logarithmically to stimuli instead of in a sensible, straight-line manner.

Isolation

What *can* we do? Let's go back to the machine. Let's assume it is well-maintained, properly designed, and as quiet as the process permits.

The actual acoustic energy being emitted by the machine is probably quite small. However, it may be setting other large surfaces into vibration, and they may be radiating far more energy than the machine itself. Check these points:

1. Are there any large metal panels or covers which are vibrating? If so, either damp the vibrations with damping materials such as special mastics or resilient pads, or resiliently mount the panels.

2. Is the machine vibrating the whole floor or structure of the building? If so, install *properly designed* resilient mounts to isolate

Master PADLOCKS
FOR PERSONNEL AND PROPERTY PROTECTION!

- Switch Boxes
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- Explosives
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- Gates
- Chemicals

Famous Master Laminated Padlocks

Multiple steel plates . . . stronger than a solid block! Genuine brass-cylinder, pin-tumbler security. No finer padlock protection.

Stainless Steel Combination Padlocks

Double-wall construction . . . 3 number brass locking mechanism. Available with "Key-Control" — one control key opens all locks.

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For switch boxes, chains, truck or freight car doors, and other uses where special shackle lengths are more desirable.

Speedy Service on Keyed-Alike and Master-Keyed Sets

Master's Service Department is geared for fast delivery . . . in emergencies, special orders are on the way within hours!

Write for FREE catalog

Master Padlocks
EVERY ONE AN OUTSTANDING VALUE

Master Lock Company, Milwaukee 45, Wis.
World's Largest Padlock Manufacturers

Circle Item No. 71—Reader Service Card

Circle Item No. 72—Reader Service Card

NOW—A light, easy handling Wrench that is NON-SPARKING Absolutely SAFE in Hazardous Atmospheres

Frontier 40-E Aluminum Alloy Pipe Wrench with Beryllium Alloy Jaws

DESIGNED and TESTED to HEAVY DUTY WRENCH STANDARDS

Here is a wrench mechanics like. It's easy to use, non-tiring on overhead work, light and strong, perfectly balanced... and best of all it's SAFE because it's non-sparking. That's important when working in hazardous atmospheres where one spark might cause an explosion.

Replace heavy and unsafe tools now, before it is too late. It costs only a little more to enjoy the safety of Frontier non-sparking wrenches. Order direct — immediate service.

Factory to User Prices

Size	Wgt. Lbs.	Handles Pipe	Price Ea.*
14"	1.8	2	13.60
18"	3.1	2½	17.80
24"	5.1	3	24.40
36"	9.5	4½	37.20

*f.o.b. factory, Niagara Falls, N. Y.

FRONTIER BRONZE CORPORATION
4897 Packard Road, Niagara Falls, New York

FOOT-TOE-LEG Protection by "Sankey"

"SANKEY" IMPROVED FOOT GUARD

The metal shield (above) is designed to furnish a maximum amount of protection to the entire front of the foot—not merely the toes alone, but also to the instep against hazards from falling, rolling or flying objects, or from accidental tool blows.

- Absolute freedom of leg motion, utmost protection and comfort come with the leg-contour shaped "Sankey" fibre shin guard (right).
- Fibre knee-shin guard (right) provides flexible knee movement on jobs with both knee and shin hazards.

For more information write today
ELLWOOD SAFETY APPLIANCE CO.
225 SIXTH ST. — NSC ELLWOOD CITY, PA.

Circle Item No. 73—Reader Service Card

the machine from the structure. Forges and presses, for example, should be set on their own separate foundations not connected to the building floor or structure.

Don't attempt to design any of these mounts yourself. You can make the situation worse. Call in the experts here. There are good, standard, commercially available mounts designed for small equipment. Others must be specially built.

3. Can you cover or enclose the entire noisy machine? A proper enclosure, consisting of heavy, rigid panels, lined on the inside with absorption, can kill a lot of the racket before it escapes into the rest of the room. Remember though, the absorption alone will *not* contain the sound. It absorbs sound contained by the panels.

4. Can you move the machine to an area where it will annoy fewer people? Or can you enclose the operator in an insulated space and protect him from the noise? The "insulated" space is essentially the same as the enclosure just described, only this time the panels keep the noise out and the absorption kills reflections within the enclosure.

The four solutions we've just discussed can reduce the direct sound from the machine by as much as 25 db.

Combination Solutions

Sometimes you can't completely enclose a machine without seriously interfering with an operation. However, you can usually put a partial enclosure around it. If so, heavy, rigid panels, lined on the inside with absorption, will reduce the sound being radiated by the machine to the surrounding area.

However, if the operator is within the enclosure, he won't get much benefit from the absorption, because the direct sound from the machine will still reach him first. However, his neighbors will be a lot happier.

If you can't put a ceiling on the enclosure, try to hang absorption above it.

The functional absorbers are handy because they load a lot of absorption into a small area. The

partial enclosures, combined with absorption, can provide up to 20 db. relief.

From this, it would appear that isolation and insulation are far superior to absorption. If only a few machines are involved in the problem, or one individual machine is the particular offender, that is true.

If, however, the whole room is filled with machines, all of them making noise, this is difficult or impossible. A typical example is a weaving shed in a textile mill or a room full of automatic screw machines. All you can do there is to mount the machines resiliently, dampen any panel resonances, and use a lot of acoustical absorption throughout the area. Then, you'll still have to settle for a five db. reduction, or even less.

Insulation

One more major problem is keeping factory noises in the plant and out of adjoining offices and the adjoining neighborhood. That means sound insulating walls and surfaces. Acoustical absorbents do not prevent sound transmission through them. Absorption is like a piece of Kleenex—it absorbs water, but water goes right through it.

It takes *constructions*, not materials, to prevent sound transmission. If you want to keep sound out an office or within a plant, you *must* use heavy, rigid, absolutely tight walls. The best type would be 12 in. of heavy masonry, but that's often completely impractical. The next best bet is a wall whose surfaces are resiliently mounted to dissipate the sound energy in the springy mounts. Again, call in the experts here. They'll save you a lot of money.

The real hitch in these constructions is *openings*. An open window or door, or even a keyhole can vitiate the whole thing. In designing a plant or office within a plant, think seriously of windowless walls, air-conditioning, and artificial light. Any opening lets the sound right through, regardless of how good the wall may be.

How to Control

How do we control noise by acoustical treatment?

Circle Item No. 74—Reader Service Card

Take the hazard out of Floor Maintenance

WITH HOLT EXPLOSION PROOF COMMANDER

Holt Commander is designed expressly for safe maintenance of floors in oil refineries, atomic research plants, powder factories, and other hazardous industries. There's no outside wiring. Entire unit, from brush to handgrip, is constructed, sealed and safety-tested to prevent sparks and static that might ignite gas, dust, fumes or vapors. Static eliminator wire in brush, a Holt exclusive, even prevents shocks to operator.

With this one machine and Holt Quick-Change Attachments you do a complete floor maintenance job — polish, wax, buff, scrub, etc. Dual handles give operator better control; reduce fatigue. Made in 16 and 20" sizes. For full story write now to Dept. W1

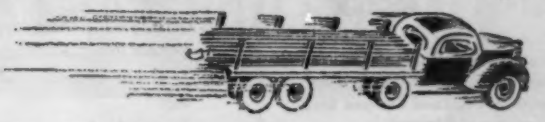
Sales and Service Centers in Major Cities

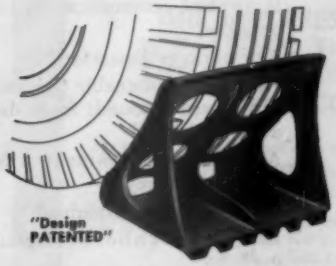
32

HOLT MANUFACTURING CO.
BETTER FLOOR MACHINES FOR MORE THAN 30 YEARS

669 - 20th St., Oakland 12, Calif., or 272 Badger Ave., Newark 8, N. J.

Beware of Run-aways!





"Design PATENTED"

IF YOUR PARKING BRAKES FAIL

on a tricky grade or at a loading platform, you will wish you had been using a set of Standard

Wheel Blocks WB2H

These Casteel *Safety* Wheel Blocks meet all chocking requirements for guarding against slips and hazards in parking, loading, towing and emergency stops on steep grades.

They are standard equipment used by many transportation companies and fleet owners of trucks and trailers.

Made of high-strength Casteel with ribbed supports and rounded corners. Cast in one-piece and provided with deep gripper teeth to hold securely on any surface . . . ice, snow or concrete.

Write for Bulletin No. N-57

CALUMET STEEL CASTINGS CORP.
1636 SUMMER STREET HAMMOND INDIANA

Circle Item No. 75—Reader Service Card

NOBODY wants to **SET the WORLD ON FIRE** (much less—his plant!) you can **STOP FIRES** *before* they start

with **FIRE PREVENTION SIGNS for SAFETY**

Ready Made in METAL PLASTICS and the new NEW self-adhering R M SIGNS

Man's best friend becomes his worst enemy! FIRE . . . out of control . in your plant or premises . . . can wipe out a lifetime of work, investment and dreams (and life and limb too!) . . . in a matter of minutes!

The time to STOP FIRES is before they start . . . with clear, concise, durable Ready Made FIRE PREVENTION Signs for Safety . . .

Ready Made SIGNS for SAFETY

READY MADE SIGN CO., INC.
signs for industry since 1861
115 WORTH STREET • NEW YORK 13, N. Y.
OVER 2,000 STOCK WORDINGS
—yours for the asking!

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115 Worth Street, New York 13, N. Y.
Yes! Send us:
☐ Current Ready Made Catalog
☐ Place our name on list for your new Ready Made Catalog
Please send further information:
☐ Safety & Accident Prevention
☐ Traffic ☐ Municipalities
☐ Special signs to order (copy enclosed for quotation).
☐ Other
☐ Fire Prevention ☐ Radiation ☐ Electrical ☐ Explosion
☐ Trucks ☐ in-plant ☐ enroute
Name Title
Address
City Zone State

Circle Item No. 76—Reader Service Card

First, determine "What is the problem?" and then determine the solution. This is the most frequently overlooked part of the whole job. For example, we've had people ask us to install an acoustical tile ceiling in their plant to quiet the noise of a rock crusher. Investigation showed that two men went into the noisy area twice a day for about 15 minutes each time. We advised ear plugs.

We've had people ask us to put tile on the walls of their plant because neighbors complained of the noise. We told them to close the windows.

In other words, decide:

1. *What are you trying to do?*
   - . . . Keep noise in the plant?
   - . . . Keep noise out of the office?
   - . . . Reduce noise levels in the plant?
   - . . . Quiet a noisy machine?
   - . . . Isolate a noisy operation?
2. *Whom are you trying to protect?*
   - . . . The operator of the noisy machine?
   - . . . The workers in the entire plant?
   - . . . A single observer of a noisy operation?
   - . . . A few noise-susceptible individuals?
3. *Why?*
   - . . . Are you trying to avoid compensation claims?
   - . . . Is there evidence of noise damage?
   - . . . Is verbal communication impossible?
   - . . . Are workers distracted?
   - . . . Are operators unable to identify necessary sounds from their own operation?
   - . . . Are you trying to make a few neurotics happy?
   - . . . Is everyone complaining?
   - . . . Are the neighbors complaining?
4. *What are the alternatives?*
   - . . . Can you move the noisy machine?
   - . . . Can you protect the operator by putting him in an isolation booth?
   - . . . Can you move the operator and his controls, dials, and equipment to a quiet place outside of the noise?
5. *Will the resultant improvements be enough to justify the expense?*

Bashlin's
30 Years of Quality . . .
STANDARD OF SELECTION FOR *Safety*

For safety wherever it is necessary to raise a man vertically through a small opening . . . Bashlin's Highest Quality Cotton or Nylon Web Manhole Harness. Will fit any normal size man.

One of the complete Bashlin line of Industrial Safety Belts and Harnesses exactly suited to your needs. The Bashlin line also includes complete safety equipment for linemen.

You Can't Afford Anything LESS Than the BEST—
***Buy* BASHLIN**
Highest Quality For Over 30 Years
Distributors in Strategic Areas in U.S.A.

EXPORT: Copperweld Steel International Co.
IN CANADA: Bell Electricord & Safety, Ltd., Toronto

Ask for . . .
CATALOG NO. 54-S

W. M. BASHLIN CO.
GROVE CITY, PA.

Circle Item No. 77—Reader Service Card

...Will a 5 db. drop do enough good? For example, will reducing the level from 115 db. to 110 db. be enough?

6. *Should you consider an entirely new approach?*

...Can you use a different process?

...Would a new plant or a new location be the only practical approach?

In a few words:

Identify your problem—*the diagnosis.* Then, decide on the proper solution—*the cure.* And finally, chose the proper materials, constructions, systems, or plans—*the medicine.*

Chances are the patient will recover, or at least feel a lot better.

Calendar Contest Winners For November

Big John was the plant Hercules;
He could lift heavy objects with ease.
But for lack of a jack
He busted his back

. . . . . .

How would you have completed that limerick?

Mrs. J. W. Deberry, wife of a pipefitter for Monsanto Chemical Co., St. Louis, won the $100 first prize in the National Safety Council's "Save-a-Life Line" contest with this line:

That's why wise guys will do things in "we's."

The contest appears monthly on the back pages of the Council's calendar. The theme for November was "Don't Overload."

William A. Lindner, chief master at arms, U.S.S. Altair (AKS 32), U.S. Navy, c/o FPO, New York, won the second prize of $50 for this line:

It's no strain and no pain to ask, "Please!"

Third prize of $25 went to Mrs.

Circle Item No. 78—Reader Service Card

COMMON SENSE SAFETY FOR PUNCH PRESSES

Direct quotes from a survey of users show their reasons for switching to Safeguard pullouts.

* Protection from repeats.

"Most important feature is that which makes it impossible for the operator to be "caught" by any pneumatic, electrical or mechanical failure of the press or its controls"

** Production

"A definite increase in production due to the fact that the press operators may now release the press from the foot pedal leaving both hands free to pick up work for the next cycle"

"Prior to Safeguards, production standards—(were) 841 to 1508 pcs. per hr. —after Safeguard, 934-1915 pcs. per hour."

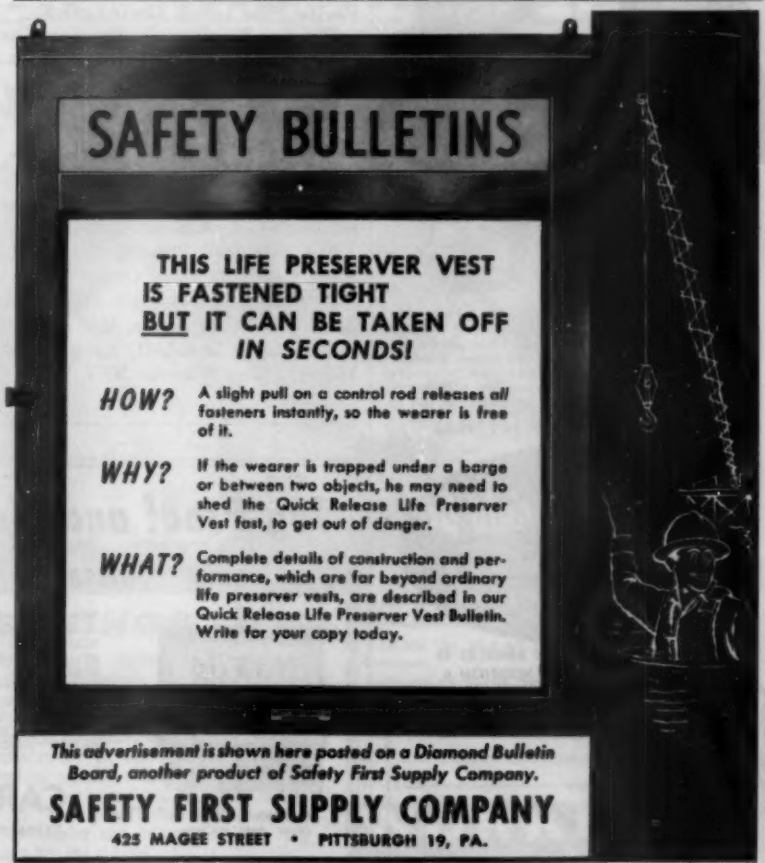
"I am enclosing a sample piece from one of the presses on which we are using Safeguard. The rate on this particular job is 2,500 pcs. per hour."

*** Operator Acceptance

"It was only a matter of days after the first trial-before the operators were expressing interest in getting more of them.

Write for full information

Safeguard Manufacturing Co.
Woodbury, Conn.


SAFETY BULLETINS
THIS LIFE PRESERVER VEST IS FASTENED TIGHT BUT IT CAN BE TAKEN OFF IN SECONDS!
HOW? A slight pull on a control rod releases all fasteners instantly, so the wearer is free of it.
WHY? If the wearer is trapped under a barge or between two objects, he may need to shed the Quick Release Life Preserver Vest fast, to get out of danger.
WHAT? Complete details of construction and performance, which are far beyond ordinary life preserver vests, are described in our Quick Release Life Preserver Vest Bulletin. Write for your copy today.

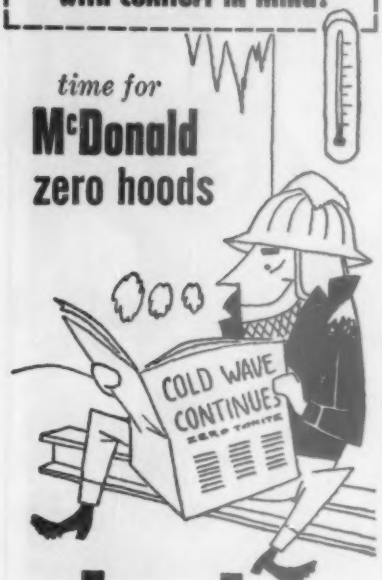
This advertisement is shown here posted on a Diamond Bulletin Board, another product of Safety First Supply Company.

SAFETY FIRST SUPPLY COMPANY
425 MAGEE STREET • PITTSBURGH 19, PA.

Circle Item No. 79—Reader Service Card

McDONALD PRODUCTS
Safety Designed...
with comfort in mind!

time for
McDonald zero hoods



for **T-CAP** *or* **T-HAT**

ZERO HOOD — Head and ear style as shown in top photos or full head-ear-neck style as above. Really keeps the cold out. 2 sizes, medium or large.

WINTER LINING— Makes the "T" hat comfortable in the coldest weather. Fleece-lined—easily interchangeable with regular headband.

Write for information and prices

B·F·McDonald Co.
Manufacturers & Distributors of Industrial *Safety* Equipment
5721 WEST 96th ST., LOS ANGELES 45
3745 GREENBRIAR DR., HOUSTON 6

Please send information and prices on ZERO HOODS.

NAME _____

FIRM _____

ADDRESS _____

CITY _____ STATE _____

Circle Item No. 80—Reader Service Card

Ray Mellies, wife of a chemist for Shell Oil Co., Woodriver, Ill. Her entry was:

With brain-work the brawn-work's a breeze.

The 30 winners of $5 prizes are:

Harry Davidson, Canadian Industries Ltd., Edmonton, Alta.

Edmund G. Kroll, Alpha Portland Cement Co., LaSalle, Ill.

Helen Lewis, Exchange Lemon Products Co., Corona, Calif.

John C. D. Oosterhout, The Texas Co., Port Arthur, Tex.

Mrs. J. A. Hartmann, Bauer & Black, Chicago.

George F. Prentice, Jr., E. I. du Pont de Nemours & Co., Nylon Plant, Chattanooga, Tenn.

F. M. Kratschmer, Union Wire Rope Corp., Kansas City, Mo.

Mrs. John R. Henry, Mountain States Tel. & Tel. Co., Denver, Colo.

P. R. Tanick, U. S. Post Office, Minneapolis, Minn.

L. J. Burke, Washington State Health Dept., Seattle, Wash.

Paul A. White, Southern Coach Lines, Chattanooga, Tenn.

Mrs. Winifred B. Jenkins, (Individual Member), Medford, Ore.

Mrs. W. L. Romander, Continental Bakery Co., Ogden, Utah.

Marilyn Kay Hathaway, Southern Pacific Pipe Lines, Los Angeles.

Charles W. Gierzak, Pyrofax Gas Corp., Div. of Union Carbide Corp., Toledo, Ohio.

Mrs. Mary Stark, Loyalty Group Insurance, Birmingham, Ala.

Mrs. W. R. Mitcham, Sandia Corp., Albuquerque, N. M.

Ralph Wilkinson, Union Steel Products Co., Albion, Mich.

Mrs. Richard Taiclet, Republic Steel Corp., Warren, Ohio.

Mrs. Beryl McGregor, St. Joseph Lead Co., Bonne Terre, Mo.

A. Starke Drischell, Long Island Lighting Co., Mineola, N. Y.

Kenneth R. Wilson, Public Service Co., Denver, Colo.

A. L. Jordan, U. S. Post Office, Tulsa, Okla.

Mrs. John J. Vanecek, Stephens Co., Aurora, Minn.

Mrs. Clarence B. Miller, (Individual Member), Rockford, Ill.

Miss Elizabeth J. Moore, Carolina Power & Light Co., Asheville, N. C.

Reginald Geiser, Employers Reinsurance Corp., Kansas City, Mo.

Maj. C. J. Dyer, USMC, Base Fire Marshal, Marine Corps Base, Camp LeJeune, N. C.

Jerry D. McCoy, Sinclair Refining Co., Houston, Tex.

Veronica M. Dolan (Individual Member), Portland, Ore.

Around the Compass

—From page 12

of C. L. Mast, secretary-treasurer, American Agricultural Editors' Assn.; Creston Foster, director of information, American Farm Bureau Federation; Milton Bliss, agricultural representative, WMAQ, Chicago, and Maynard H. Coe, director of NSC's Farm Division.

The winners:

Illinois:

Moline, *The Furrow.*

Mt. Vernon, WMIX.

Indiana:

Fort Wayne, WKJG and WKJG-TV.

Huntington, *The Indiana Farmers Guide.*

Indianapolis, *The Hoosier Farmer,* WIBC.

Iowa:

Des Moines, *Wallace's Farmer* and *Iowa Homestead,* WHO.

Kansas:

Topeka, *Kansas Farmer, Missouri Ruralist.*

Fog-Proof and Clean *with Plain Water*

Glasses • Goggles • Face Shields

Available in light or heavy duty stations.

NO-FOG® LENS CLEANING TISSUES are double duty . . . fog-proof and clean in one operation . . . with plain water. No expensive chemicals to buy or stock. For glasses, goggles, face shields, gas masks . . . either glass or plastic. Non-abrasive and harmless to the skin.

These new tissues are economical, ample sized (4½" x 10¾") and may be re-used several times. Send for samples and literature or contact your Safety jobber.

®Reg. U. S. Pat. Off.

CARHOFF COMPANY
11706 Kinsman Ave. • Cleveland 20, Ohio

Circle Item No. 81—Reader Service Card

Maryland:
Baltimore, WBAL.
Massachusetts:
Boston, WHDH.
Springfield, *New England Homestead.*
Michigan:
Benton Harbor, WHFB.
East Lansing, *Michigan Farmer,* WKAR.
Minnesota:
St. Paul, *The Farmer.*
Missouri:
Columbia, KOMU-TV.
Jefferson City, KLIK.
Marshall, KMMO.
St. Joseph, KFEQ and KFEQ-TV.
Springfield, KWTO.
New York:
Ithaca, Rural Radio Network.
New York, NBC Radio Network.
Rochester, WHEC.
Schenectady, WGY.
North Carolina:
Winston-Salem, WSJS and WSJS-TV.
Ohio:
Cincinnati, WLW.
Cleveland, *Republic Farm Spokesman.*
Worthington, WRFD.
Oklahoma:
Oklahoma City, WKY-TV.
Oregon:
Corvallis, KOAC.
Pennsylvania:
Erie, WICU.
Harrisburg, *Farm Bureau Mirror.*
South Dakota:
Yankton, WNAX.
Tennessee:
Knoxville, WNOX.
Washington:
Yakima, KIMA.
Canada:
Saskatchewan,
Moose Jaw, CHAB.

Field Service
National Safety Council

Headquarters: 425 N. Michigan Ave., Chicago 11. Paul F. Hill, manager; Noble Dutton, assistant manager; Joseph E. Lovvorn, finance advisor; Nils A. Lofgren, program consultant.

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7. James D. Hill, 3276 Darvany Dr., Dallas 20, Tex. Ph: Fleetwood 1-6609 (Tex.)

8. Evett N. Allen, 200 Cliffdale Rd., Nashville 14, Tenn. Ph: Donelson 67293 (Ark., Ky., Tenn.)

9. Philip N. Streit, 4931 Sherwood Dr., Kansas City 16, Mo. Ph: Gladstone 3-1531 (Kan., Mo., Okla.)

10. George W. Harris, 425 N. Michigan Ave., Chicago 11. Ph: Whitehall 4-4800 (Ill., Ind.)

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14. Robert D. Hopper, 6348 Teller, Arvada, Colo. Ph: Harrison 4-1383 (Ariz., Colo., N. Mex., Utah, Wyo.)

15. Alton P. Bunderson, 6505 Fairfield St., Boise, Idaho. Ph: 4-4647 (Idaho, Mont., Oreg., Wash.)

16. John C. Hall, National Safety Cncl., 703 Market St., San Francisco 3. Ph: Exbrook 2-0945 (Calif., Nev.)

17. Vincent R. Gallalee, 425 N. Michigan Ave., Chicago 11, Ph: Whitehall 4-4800 (Field Finance)

*Temporary Address.

Circle Item No. 82—Reader Service Card

This is it! MAKE QUIET AREAS AT LOW COST with E. H. Noise Reduction Panels

E. H. Panels are 4 x 8' for easy building.

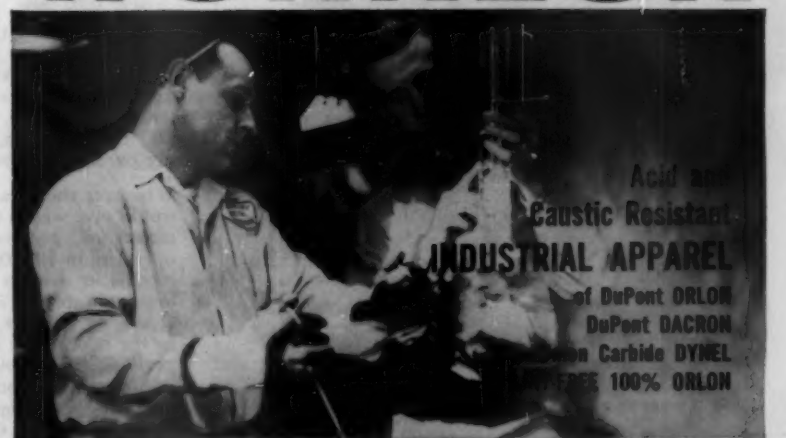
Here is a real contribution to industry's need for low cost, soundproof and sound absorptive noise barriers. *Can be cut in the field to any size and shape!* Complete with erection members, soundproof doors and bucks. Write today for complete literature to Dept. 10-J.

ELOF HANSSON, INC.
Acoustical Division
711 Third Avenue, New York 17, N. Y.

Enclose noisy machinery

50 TIMES LONGER WEAR *with*

WORKLON



SAVINGS UP TO 93%

Worklon work clothes resist punishing acids and chemicals . . . actually outlast cotton and wool garments by 50 to 1 as proved in on-the-job tests under corrosive chemical conditions. No need for constant replacement of acid-damaged uniforms! Worklon apparel wears far longer, saves you as much as 93% in work clothes costs! Want proof? See Worklon's new 1958 catalog and information book. It's yours for the asking!

SEND FOR NEW FREE CATALOG

WORKLON, INC., Dept. NS-10 253 W. 28 St., N. Y., N. Y.
Gentlemen:
Please send me the new Worklon Catalog FREE!
NAME _____
ADDRESS _____
CITY _____
STATE _____

WORKLON

Circle Item No. 83—Reader Service Card

Self-Powered
COMBINATION SCRUBBER-VAC
Cleans Vast-Area Floors "By the Mile"

Monoxide Eliminator, Powder Dispenser, and Rinse Assembly are accessories

- **Completely mechanizes scrubbing**
- **Coverage up to 24,400 sq. ft. per hour!**
- **Mounts a SELF-STARTING gasoline engine**

This *all-in-one* cleaning unit, *Finnell's 218G Gasoline-Powered Combination Scrubber-Vac,* is indeed the answer to today's need for increasing output per man-hour on vast-area scrubbing. *The 218G completely mechanizes scrubbing* — applies the cleanser, scrubs, flush-rinses if required, and picks up (damp-dries the floor) — *all in one operation!* Independence from power lines permits the machine to go wherever the operator guides it... working in and out of production areas with ease ... *scrubbing continuously.*

Maintenance men appreciate the labor-saving features of this unit. The gasoline engine starts quickly and easily by pressing the starter button. And there are no switches to set for *fast* or *slow* — slight pressure of the hand on clutch lever adjusts speed to desired rate (up to 136 fpm). Two 18-inch brushes give a 36-inch scrubbing surface. *One engine* (2 cyl., 4 cycle, up to 10.1 hp maximum, and air-cooled) operates all working parts. The powerful vac performs quietly.

Whatever the area of your floors, find out what *you* would save with a *Combination Scrubber-Vac. Finnell* makes *self-powered* models, gasoline or propane operated, in 18, 30, and 36-inch sizes, and also *electric* models in sizes to meet specific needs. It's good to know too that *a Finnell Floor Specialist and Engineer is nearby* to help train your maintenance operators in the proper use of *Finnell Equipment* and to make periodic check-ups. For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 2201 East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.

Originators of Power Scrubbing and Polishing Machines

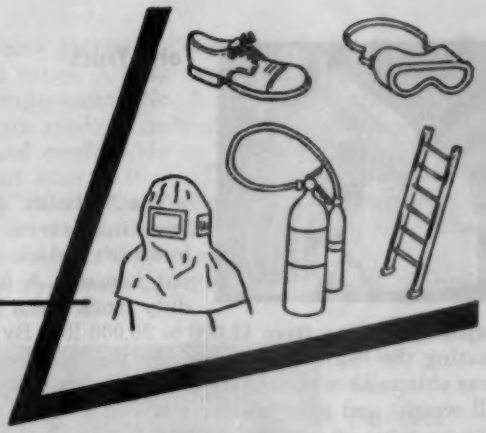
Everything FINNELL for Floor Care

BRANCHES IN ALL PRINCIPAL CITIES

See the Finnell Exhibit • **PLANT MAINTENANCE & ENGINEERING SHOW** • **Chicago** • **January 27-30** • ***Space 755***

Circle Item No. 84—Reader Service Card

New SAFETY EQUIPMENT



Product announcements in this section are reviewed for compliance with the advertising policy of the NATIONAL SAFETY NEWS. Inclusion should not, however, be construed as endorsement or approval by the National Safety Council.

Plastic Lens Rayon Cleaning Tissue

A new, non-scratching rayon fiber cleaning tissue suitable for wiping plastic lenses of safety goggles has been developed.

Made with ¼-in. (or longer) fibers it fills the need for a non-silicone impregnated cleaning tissue. The tissues have been developed to conform to U. S. Government specifications for a cleaning tissue that neither scratches nor mars plastic lenses.

The high wet-strength of the fibers eliminates shredding or tearing when the surface to be wiped is either fogged or wet. The cleaning tissues are manufactured in a standard 3 x 7-in. size and will fit most dispensers now in use.

Lensclean, Inc., 135 W. 25th St., New York 1, N. Y. (Item 301)

Air Vent Noise Silencer

The "Quiet-VENT" silencer is designed to prevent the transmission of noise through return air vents without impeding air passage.

The functionally constructed unit is designed to fit snugly inside normal walls and the one-piece design makes handling and installation easy and simple. The silencers are available in many sizes and are sturdily constructed of 22 and 24 gauge steel. They feature an attenuation of 40 db. or more. The "Quiet-VENT" silencers are also available in a "hang-on" type for economical installation.

Industrial Acoustics Co., Inc., 341 Jackson Ave., New York 54, N. Y. (Item 302)

Tank Level Alarm

An automatic overfill alarm in use on tank trucks prevents product loss during many liquid-handling operations. The self-contained portable unit gives warning when liquid reaches a predetermined level avoiding costly and dangerous spillage.

A simple float mechanism activates the gas-powered warning horn instantly sounding a continuous alarm audible up to one-half mile. Filling crews are immediately alerted without having to spend unnecessary man-hours checking filling progress. The unit is easily clamped to manholes of tank trucks, freight cars and permanent installations.

Non-electric and non-pneumatic, the alarm is safe for all types of liquid-handling applications throughout the petroleum, chemical and transportation industries. Stainless steel units are available for use with corrosive liquids.

Falcon Alarm Co., Inc., 243 Broad St., Summit, New Jersey (Item 303)

Universal Bridge Spectacles

The BP series spectacles with Universal Bridge incorporates the new square shape as well as spatula temples. They are available in 44 m/m, 46 m/m and 48 m/m eye sizes in 6.00D clear or green optically corrected lenses of tempered glass or CR-39 plastic.

The Universal Bridge design is said to eliminate the need for the stocking numerous bridge sizes and allows an immediate and correct fit. The frame is lightweight, yet rugged in construction and is made of non-flammable acetate. These are not injection molded frames but are made of the same high quality material as are optical frames, and in a manner to allow greater safety and comfort to the wearer.

Eastern Safety Equipment Co., 25-09 36th Ave., Long Island City 6, N. Y.

For More Information—Circle Item Number on Reader Service Postcard

Fork Truck

The "Elbolift" is the first industrial high fork lift truck without a mast. A heavy-duty truck has a lifting capacity ranging from 12,000 to 20,000 lbs. By eliminating the heavy mast assembly, the manufacturer was able to save thousands of pounds from the over-all weight and gain greater visibility because there are no rams or uprights to interfere with the driver's vision.

The truck's narrow over-all width of 48 in. has two 16-in. wide tires providing better load distribution and stability.

Safety was not overlooked in the design of the truck. The driver is well protected on the sides by the counterweight and in the rear by a heel plate. A deadman control automatically applies the brake and returns the control to neutral when the driver dismounts.

The operator's platform is easily mounted from the rear. An exclusive new power steering control eliminates guesswork. The operator always knows the exact position of his steering wheels by the position of the handle which indicates the direction the wheels turn.

The truck is versatile in its load handling ability. It is equipped with manually adjustable forks as standard equipment; however, hydraulically adjustable forks, side shifter, and ram may be obtained as single or combination attachments for use in handling dies, pallets, platforms and coils.

With only an 80-in. over-all height, the 120-in. lift is the highest ratio between lift and over-all height of any industrial truck in the field.

Automatic Transportation Co., 149 W. 87th St., Chicago 20, Ill. (Item 305)

Lite-Wayte Vacuum Cleaner

A new all-aluminum vacuum cleaner that weighs only 19 lbs. has been developed for hotels, hospitals, and other institutions where compact, easy to carry equipment is desired.

Model 404 has a powerful ¾ horsepower, by-pass motor, 4-gal. aluminum tank with a nylon filter for wet or dry pickup. The Market type handle and ball bearing cushion casters make it easy to move or carry. It is designed for use with 1½-in. or 1¼-in. hose and tools.

Hild Floor Machine Co., Inc., 1217 W. Washington Blvd., Chicago 7, Ill. (Item 306)

Safety Design Match Books

A series of "stock" safety designs on match book covers consists of four different designs, each bearing a different safety theme.

The promotion of industrial safety programs by coordinated, well-planned and distributed match books bearing single or series of safety messages has been proved a very effective means of conveying a safety message not only to employees but to their families.

The manufacturer offers a distribution program which insures full and proper distribution of match books bearing safety messages. For plants where match books are not allowed, the company has plans of distribution in neighboring outlets.

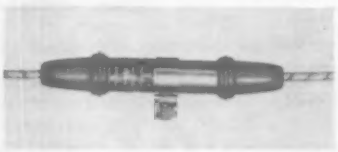
Universal Match Corp., P. O. Box 5841, 400 Paul Ave., St. Louis 21, Mo. (Item 307)

Dunking Station

The most recent addition to this line of safe smokers is the deluxe jumbo floor model, less the sign and decal. The model was especially designed for use in institutions, hospitals, first-aid rooms and other locations where the safety slogan sign and decal are not wanted. The jumbo size canisters are of heavy cast aluminum with smooth brightly polished finish. The canisters are guaranteed. The unit is 42 in. high and has a heavy weighted base.

The dunking stations effectively solve fire hazards where smoking is a problem. Canisters are partly filled with water, and cleaning takes only a few seconds.

Standard Industrial Products Co., Dept. S, 920 N. Garfield Ave., Peoria, Ill. (Item 308)



Safety Flasher

Industrial uses for this AC-DC safety flasher are unlimited where flashing lights or intermittent sound warnings are a safety factor to alert and warn of dangerous areas such as shafts, door openings onto steep downward stairs, highly explosive no smoking areas, entrances to photographic dark rooms, material handling equipment, etc.

The Kay-Lab "Stop-It" safety flasher has a no-failure feature. If the flasher should fail, warning lights burn steadily or the warning device sounds constantly. The flasher will operate on either 6 or 12-volt batteries or on a 110-volt step-down transformer. Installation is quick and easy on vehicles, equipment or in dangerous areas of buildings and it has passed rigid state tests.

Macchi & Co., 819 Valencia St., San Francisco 10, Calif. (Item 309)

Chemical-Abrasion Resistant Gloves

Tests have shown that these tough, abrasion-resistant PVC gloves last from two to five times longer than many types of rubber, leather or coated gloves. They resist virtually all chemicals and solvents encountered in industrial use, including acids, alkalis, fats, greases, oils, petroleum products, alcohols and waxes.

The extra flexibility gives comfort and dexterity. The gloves have been used extensively in chemical, drug and food industries and have wide application in the metal industry, etc. They will not crack or peel and are non-flammable and non-oxidizing. The PVC gloves are furnished in a wide variety of styles including gauntlet, knitted wrist, ribbed surface and either fully coated or palm coated.

Jomac, Inc., 6128 N. Woodstock St., Philadelphia 38, Pa. (Item 310)

Safety Hat Lamp Bracket

SuperGard safety hats and caps are now available with No. L-1 Universal Lamp Bracket which fits all types of Edison, Wheat and carbide lamps. The bracket accommodates both tongue clip and hook clip lamps, and is available separately for easy attachment to hats and caps already in service. The L-1 is insulated against current passage.

The hats and caps are made of tough, lightweight polyester resin for comfort as well as protection. One size hat or cap is adjustable to all head sizes. Water, mildew and fungus-proof, the hats and caps are easily sterilized and only the sweatband needs replacement.

The hats are approved by the Coal Mine Compensation Rating Bureau of Pennsylvania.

The Fibre-Metal Products Co., Chester, Pa. (Item 311)

Safety Glasses

Smart styling combined with practical on-the-job utility are the features incorporated in the new plastic and metal frame safety glasses known as Comfort Bridge Stylist Safety Glasses.

The new glasses are offered with the popular F-7 shaped lenses in clear super-safety No. 1 and anti-glare super-safety No. 2 glass, or in clear plastic. They are made of polyethylene and the pads are light and comfortable on the nose and conform to different nose contours. Pads also give excellent closure at the nose section which keeps foreign bodies from entering the eye at this point. They are available in various sizes.

Chicago Eye Shield Co., 2705 W. Roscoe St., Chicago 12, Ill. (Item 312)

Wire Sling Handles

An improved handle designed for Gripper woven wire slings is thinner and lighter, gives better gripping action and provides for positive identification as to the size and capacity of the sling.

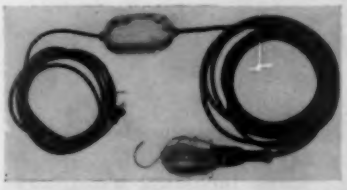
The design consists of a specially machined and drop forged handle that is mechanically fastened to the fabric by means of a stainless steel spiral, eliminating the need for welding the fabric to the handle. The handle is the same thickness as the fabric itself and makes rigging loads easier, safer and faster. The new design is 40 per cent lighter in weight than the old style handle.

The better grip which the new handle gives the sling when used in a choke hitch results from reducing the shank of the female handle to a 2-in. width, thereby increasing the fabric area on any given length of sling.

To assure positive sling identification and eliminate the use of metal tags, the size and capacity of the sling is forged into the handle.

The stainless steel connecting spiral that joins the fabric to the handle offers 60 per cent greater tensile strength over the carbon steel spiral previously used.

Cambridge Wire Cloth Co., Cambridge, Md. (Item 313)



Safety Drop Cord

Electrical and safety departments responsible for the safety of personnel working in manholes, tanks and other places that are especially hazardous electrically, will be interested in a safety drop cord that provides a 12-volt, 100 watt outlet from the line voltage and reduces the hazards of electrical shock.

A build-in transformer with a waterproof sealed housing is claimed to be the principal feature of the new cord. 50 ft of oil-resistant wire make up the cord's length—20 ft. leading into the transformer and 30 ft. coming out of the secondary. A vapor-proof lamp guard is available for use with the cord.

Sittler Corp., 18 N. Ada St., Chicago 7, Ill. (Item 314)

Welders' Cover Goggles

"Soft-I" frame welders' cover goggles, Style 5050 provide new comfort in eye protection. The conventional style cover-all goggle is made of soft, pliable plastic and the deep frame holds itself comfortably to the contours of the face and head and fits easily over prescription glasses.

The goggles are available with CR-39 plastic cover lenses which are said to meet every requirement for maximum protection. Heat-treated filter lenses are available on request. Style 5051 for chippers is an adaptation of Style 5050.

Welsh Mfg. Co., 11 Magnolia St., Providence 9, R. I. (Item 315)

Dynel and Orlon Clothing

Dynel and orlon garments for protection of workers exposed to battery acids or other corrosives in manufacturing or servicing operations are unaffected by acids, alkalies and most organic chemicals.

The "Ply Garb" synthetic garments are sewn with chemically resistant thread, double-needle lock stitched seams and all points of strain are bar tacked. The points of greatest wear, such as pocket bands and waistbands are self-faced. The garments are washable, non-shrinking and non-absorbent and are immune to mold, fungus and insect attack. The clothing is tailored in coveralls, shop coats or two-piece uniforms in natural or gray colors. In addition, they may be ordered with custom features.

Milburn Co., 3246 W. Woodbridge, Detroit 7, Mich. (Item 316)

Floor-Wall Cleaner

A non-flammable cleaner developed for all types of floors, including wood, concrete, linoleum, etc., as well as for walls, painted surfaces and metal trim, is available from the manufacturer for free sampling.

Rapid, effective and economical to use, the product, "Finorclean," is a liquid concentrate which acts quickly to remove dirt, grease and oil and leave surfaces completely clean and film-free. It is an excellent wax remover and is odor-free and contains no abrasives, acids or solvents.

Fine Organics, Inc., 211 E. 19th St., New York 3, N. Y. (Item 317)

Safety Bench Can

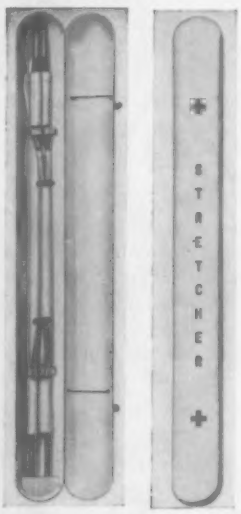
This safety bench can offers extra convenience in the cleaning of small and moderate size parts. Parts of moderate size are placed on the 9⅛ in. dasher pan of perforated metal which is then pushed down to submerge the load in the cleaning solution or solvent. A strong spring returns the dasher pan above the level of the solution to permit thorough draining. A recessed area in the center of the dasher pan prevents the parts from becoming caught under the rim of the can.

For cleaning small parts, the portable "Parts-Basket" of perforated metal is used. Parts are loaded into the basket and the entire load can be submerged and then drained on the dasher pan. The wire handles keep hands out of contact with the cleaning solution.

The bench can has a maximum capacity of one gallon but is designed and marked so that it can be used efficiently as a one-half gallon container.

The wide base prevents accidental tipping and the full size cover is strongly hinged to permit prompt closing. The body and cover are made of 24 gauge terne plate (15 lb. grade) finished in durable baked red enamel.

Justrite Mfg. Co., 2601 Southport Ave., Chicago 14, Ill. (Item 318)



Plastic Stretcher Case

A new reinforced plastic stretcher case has been developed for the protection of industrial stretchers. The use of reinforced plastic is said to have many advantages over previous materials as it is corrosion resistant and eliminates maintenance. Further advantages are gained by the new cylindrical design, because there are no sharp corners. The case is not affected by moisture and is acid-proof.

The finish is in white or yellow, with bright green letters. These letters are permanently cast in place and never need painting as the color is all the way thru the plastic. The hardware is of aluminum alloy and is rust-proof. The case has provisions for holding the standard size stretcher and also a blanket.

Osborn Mfg. Corp., P. O. Box 167, Warsaw, Indiana (Item 319)

Dry Chemical Fire Extinguisher

U. S. Coast Guard approval has been given to the "Safe-T-meter" portable, pressurized dry chemical fire extinguishers. The extinguishers have UL labels for marine installations where Class B (flammable liquid) and Class C (electrical) fire hazards exist.

The extinguishers are listed by UL and approved by the Coast Guard for service down to —65 F. Inert nitrogen gas under 350 lbs. pressure in the 1-P spun steel cylinder expels non-toxic, non-abrasive, non-conductive, fire-killing powder from a safe distance. The powder cloud guards the operator from heat and flame.

Safety First Products Corp., 175 Saw Mill Road, Elmsford, N. Y. (Item 320)

Safety Slogans— Safety Gloves

Printing on the backs of this manufacturer's line of industrial gloves gives the buyer "walking billboards" all through the plant.

The free service means that a company's message is read hundreds of times a day whenever a worker looks at his hands. This constant reminder can be an excellent help in promoting safety programs, putting over company policies, etc.

A typical example of how this service is used is a short message such as "Work Safely." This slogan will remind operators continuously of general safety rules and job hazards. The company's complete line of industrial and safety gloves includes all popular glove styles; canton flannel, double palm, hot mill, reversible, jersey, nylon blend, leather palm, drivers' gloves, welding gloves and many others.

Riegel Textile Corp., Conover, N. C. (Item 321)

Plastic Apron

A new plastic apron is unusually soft and flexible, fire-retardant and will withstand temperatures to 300 F. The apron resists aging and will not crack, peel or deteriorate when subjected to —35 F. Longer service is said to result from its greater resistance to oil, grease, acid and fatty acid. The apron is also available in sleeves.

Singer Glove Mfg. Co., 860 W. Weed St., Chicago 22, Ill. (Item 322)

Welding Booths

Specifically designed to overcome the hazards of both toxic gases and arc flashes occurring during welding, the Series W-200-75 welding booths feature high velocity suction and durable steel side extensions. They can be connected singly or in a series bank to one main trunk line and a suitable blower is said to boost production efficiency as much as 33 per cent.

Sizes of the booths vary in height from 30 to 42 in. and in width from 30 to 60 in. and in depth 28 to 36 in. Appropriate blowers are available with air movement power of 400 to 1,650 cfm.

The exhaust and fresh-air systems for industrial safety and health applications are Government-approved.

Engwald Corp., 125 Sheridan Blvd., Inwood, R. I., N. Y. (Item 323)

Water-proof Clothing

"Life Guard" is a new lightweight waterproof rain clothing in an air rescue high-visibility yellow color. The suit weighs 1¼ lbs. complete. A neoprene coating over nylon cloth makes the suit durable and rugged and the clothing offers freedom of body movement; lightness; abrasive resistance; flexibility and comfort in below-zero temperatures, and resistance to water, oil, solvents, mildew and acid.

The suits are available in three models: open front; slip-over head jackets, and overall pants with braces with elastic inserts for greater shoulder movement.

John E. Dorsey Co., 570 E. First St., Boston 27, Mass. (Item 324)

Power Megaphone

This power megaphone is expected to fill a need in safety, fire-fighting and disaster control.

The "Mighty Voice" weighs only 6 lbs. and has an effective range of nearly 1,000 feet and operates on self-contained, standard-size flashlight batteries. The unit is designed around a noise-cancelling microphone system which eliminates all background noise outside the voice frequency range. "Mighty Voice" is rugged for rough handling and shock resistance.

Antrex Corp., 134 N. LaSalle St., Chicago, Ill. (Item 325)

Emergency Lighting

"Surelite" provides illumination instantaneously in the event of a power failure. Critical locations such as first-aid rooms, exits, assembly rooms, or any area where darkness could cause panic, loss of control or accidents, can be equipped as a safety measure with the lights.

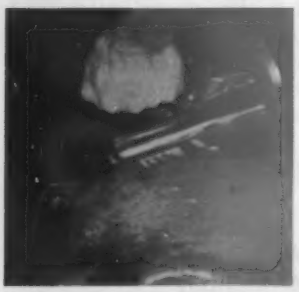
Improved two-lamp standby and two-lamp portable "Surelites" are equipped with sealed beam lamps adjustable both vertically and horizontally and powered by series-parallel dry batteries.

Model DB, the standby, uses an 800 candlepower wide angle floodlight in both lamps. Each furnishes 4 hours of intermittent or 3 hours of continuous light from fresh batteries. It comes equipped with 6-ft 3-wire rubber covered cable ground cap and adaptor to plug into 115-volt light circuit.

The light does not operate while AC voltage continues but an interruption in line voltage instantaneously turns the light on to provide illumination. When AC voltage is resumed it automatically shuts off.

Model DF is a portable lamp only without the automatic standby feature. One lamp has the 800 candlepower floodlight and the other a 40,000 cp. spot. Each is equipped with an on-off switch. Flood light and spotlight bulbs are interchangeable.

Clean Sweep Co., 6534½ Whittier Blvd., Los Angeles, Calif. (Item 326)



Safety Cleaning Compound

Danite is a liquid compound diluted with water for cleaning production machinery, light reflectors, floors, windows and all tough cleaning operations where a strong compound is needed.

The compound makes it possible to eliminate the use of flammable or toxic solvents when washing down machine tools and other equipment.

The product is not flammable and does not give off objectionable odors or burn the skin. Therefore, it is possible to apply the solution by pressure spray. Excellent cleaning results are due to the fact that, unlike solvents that thin out the accumulated oil and dirt and spread it over a larger surface, the wetting agents in Danite penetrate through layers of dirt, enveloping each particle of soil with a surface active agent. When the equipment is wiped down with a damp rag, the dirt is floated away from the surface, leaving it clean.

Other important industrial uses are hot and cold tank degreasing of metal parts, cleaning of wire drawing dies, removal of printing ink deposits from presses, etc.

The Daniels Co., 17 Bolt St., Lowell, Mass. (Item 327)

Safety Hammers

A safety ball peen hammer designed to minimize chipping of critical areas and increase safety is available in several weights with polished and black finishes.

Each hammer is individually treated on the chamfer by induction heat treatment to produce a lower degree of hardness on the rim of the hammer face where it is most needed. Face hardness is maintained to insure long life.

The hammers have drop-forged heads, hardened and tempered on the faces and peens. All heads have been superheat treated and the peens are perfectly ball shaped. Multiple wedging secures the heads and selected hickory handles are processed to prevent shrinking. Both the polished model, No. 316, and the black finish models are available in weight range from 4 oz. to 40.

The Stanley Works, 111 Elm St., New Britain, Conn. (Item 328)

Plastic Goggles

A new monogoggle with a snug-fitting, pliable nosepiece, incorporates extra features for greater comfort, protection, vision and ventilation.

The 100 series has a special pliable nosepiece with a flat inner frame edge to assure a snug fit and more comfort. The extra width of the series covers the largest spectacles and permits wider, distortion-free vision. There are 410 air slots in the frame for better ventilation.

Willson Products Div., Ray-O-Vac Co., 212 E. Washington Ave., Madison 10, Wisc. (Item 329)

Jointer Guard

The "Vu-Jointer" features a precision - engineered standard of cast aluminum with a shield of ½-in. tough plexiglass plastic. The shatter-resistant, fully transparent shield covers the jointer's rotating blades without obscuring them from the operator's view. The guard also functions as a work-speeding guide. Its steady, vertical holding pressure adds ease and accuracy.

The new tool is readily adaptable to any conventional jointer, 4 in. to 12 in. blade size and performs in a wide variety of operations such as regular jointing cuts, chamferred edges, bevels, and any size vertical rabbet.

Brett-Guard Co., 105 S. Dean St., Englewood, N. J. (Item 330)

Glove Inserts

These glove inserts, which prevent tendon cuts and hand lacerations were developed for the sheet metal divisions of the steel and stamping industry. The protective inner liner affords protection from sharp and jagged cuts which penetrate regular gloves.

With the use of "Mesh-Gard" inserts which incorporate a multi-layer of fine flexible steel mesh sewn to an expansible glove, hazards to hands can be reduced. The "Mesh-Gards" are available in four popular styles (illustrated).

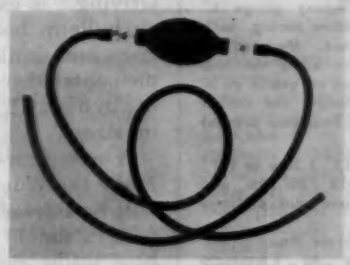
Safety Clothing & Equip. Co., 1990 E. 69th St., Cleveland 3, Ohio. (Item 331)

Plant Visitor Safety Glasses

A low-cost spectacle designed to be given to plant visitors to wear while on tour and to take home with them comfortably fits all faces. The glasses weigh less than one ounce and the frame is styled in the new eye shape and is molded of cellulose acetate in the demi-amber color.

The lenses are curved, crystal-clear CR-39 plastic, .052 in. thick for impact resistance. The 50mm size provides a broad area of coverage. Each spectacle is furnished complete in a sealed cellophane envelope.

Industrial Products Co., 2850 N. Fourth St., Philadelphia 33, Pa. (Item 332)



Siphon Pump

Model P is a hand - operated, self - starting siphon - pump designed for the safe handling of concentrated acids. The pump has newly developed check valves of du Pont "Alathon," a compound which is unaffected by concentrated hydrochloric, sulfuric and hydro-fluoric acids (at room temperature) as well as alcohols, gasoline and most industrial solvents. The hand bulb and tubing are made of neoprene. The pump is 7 ft. long and permits speedy transfer of dangerous liquids with operator safety.

General Scientific Equipment Co., 7516 Limekiln Pike, Philadelphia 50, Pa. (Item 333)

NEWS ITEMS

Martin Hirschorn

INDUSTRIAL ACOUSTICS CO.

Martin Hirschorn, president, has announced the formation of a division to handle products applicable to the air conditioning field.

The new department will be in charge of development and sales of silencers of fan noise in air handling systems, silencers for return of air from offices, etc., and silencers for cooling tower intakes and/or discharges and related noise control equipment for air handling systems. The new department will be headed by Charles N. Rink.

Industrial Acoustics is located in New York City.

* * *

WEST CHEMICAL PRODUCTS CO., INC.

The West Disinfecting Co. of Long Island City, N. Y., has changed its name to West Chemical Products, Inc.

The increasing growth and diversification of the company made their original name too limited a reflection of the company's activities. Today, the company manufactures hundreds of chemical specialties for protective sanitation and preventive maintenance.

* * *

WALTER KIDDE & COMPANY, INC.

A new 12,800 sq. ft. Detroit office and service building has just been opened at 20850 Coolidge Highway, Detroit, Mich.

Designed specifically to the company's needs, it contains offices, display and conference rooms. In addition, the building provides space for a large fire extinguisher and parts inventory, and a complete service and recharging station with hydrostatic testing facilities.

From the new building the company will handle sales and services of its complete portable fire extinguisher line, built-in carbon dioxide systems, and ultrasonic and photo-electric burglar detection devices.

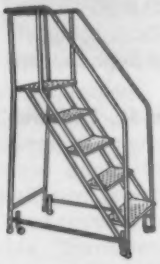
* * *

Circle Item No. 85—Reader Service Card

COTTERMAN

WELDED STEEL SAFETY LADDERS

For Filing Rooms — Stock Rooms — Vaults



SAFE
•
STRONG
•
EASY TO MOVE
•
EASY TO CLIMB
•
NON-SKID STEPS

Frame work made from heavy gauge 1" diameter round steel furniture tubing, with all joints electrically welded. Mounted on Swivel Brake Casters which allow the ladder to be rolled freely when no one is on it. When you step on the ladder the rubber cushioned legs rest on the floor and prevent rolling.

Made in 13 heights—from 12" 1 Step to 117" 13 Step, and in 4 widths—18", 20", 26" and 32", with and without hand and platform rails.

We also manufacture the

COTTERMAN TRUCK - N - LADDER

A Truck and Ladder combined in a single unit.

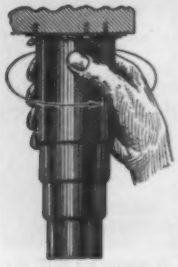
Write for Folder No. 56-N for complete information and prices on both these items.

Manufactured by

I. D. COTTERMAN

4535 N. Ravenswood Ave. Chicago 40, Ill.

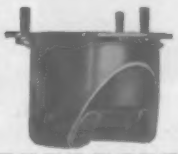
Guide Pin Covers



PROTECT OPERATOR AND GUIDE PINS

Effectively guard against injury to operator, die and press on operations where bushings leave the guide pins. Protect pins and bushings from chips and dirt when entire pin and bushing are covered. Inexpensive, easy to attach.

Felt Oiler Ring in top units provides POSITIVE lubrication.



WRITE TODAY FOR DESCRIPTIVE FOLDER AND PRICE LIST

Name_____

Address_____

Title_____

Wiesman Manufacturing Co.

31 South St. Clair Street • Dayton 2, Ohio

Circle Item No. 86—Reader Service Card

What's New

—From page 97

assist community officials and safety council leaders through civic, business, religious, social or professional groups to which they may belong.

New Signs of Life educational materials have been produced by the National Safety Council and will be widely circulated during this period. A new "B" size (17 in. x 23 in.) four-color poster, "Your Signs of Life for Safer Driving," is excellent for posting on bulletin boards, in store windows and similar locations. It supplements other Signs of Life posters in 8½ x 11, 17 x 23, and 25 x 38 in. sizes.

A new four-color leaflet, *Signs Make the Way Safe and Pleasant*, will be offered in eight pages. It tells in simple everyday language how traffic signs are truly Signs of Life on today's highways.

The planning guide and information and facts about the February emphasis program appeared in the December issue of *Traffic Safety*. Pattern radio scripts, news releases, mats, leaflets and other materials will be mailed free of charge to those using the reader service postcard opposite the last page of that magazine.

More 5-Minute Talks

"Some Simple Arithmetic." "More Arithmetic." "Applied Arithmetic."

Those are titles appearing in a new volume of *Five Minute Safety Talks for Driver Supervisors*. Book Two, like its forerunner published by the Motor Transportation Division of the National Safety Council, also contains other unusual titles.

For example: "Mishmash." "More Mishmash."

The book of 52 talks (one for each week of the year) was written by Russell FitzPatrick, magazine editor, columnist, and safety director.

It contains new ideas and practical information for use in short safety talks, and as a reference in writing safety bulletins, counseling drivers or planning safety meetings.

Circle Item No. 87—Reader Service Card

AERVOID REG. U.S. PAT. OFF.

PORTABLE

All Stainless Steel—Vacuum Insulated (Hot or Cold) Food, Soup, Coffee, Milk and Beverage Carrier-Dispensers . . .

To-day's "Modern" trend toward centralization of food preparation is a move toward Economy, Better Quality and Higher Sanitary Standards.

The "move-ability" of AerVoiDs made possible this modern concept of Mass-Feeding, which has now been successfully adopted by Institutions, Schools, Hospitals, Industrial Plants, Hotels, Caterers, Camps, Air Lines, Civil Defense and many other Government and Commercial feeding operations.

All AerVoid Equipment, as indicated in our specifications is "In Compliance" with the sanitary construction requirements of the U. S. Public Health Service Codes.

Write for FREE Literature Kit NS-88

VACUUM CAN COMPANY

19 SOUTH HOYNE AVENUE

CHICAGO 12, ILLINOIS

Another Safety Winner — the C & E (Ericson) Safety Transformer

Another C & E (Ericson) product developed expressly to enhance safety in maintenance or inspection. It is ideal where electrical illumination is required in moist or damp places, as the voltage can be reduced from 125 to 6, 12, or 32 volts, thus eliminating the danger of shocks. Just another winner in the extensive C & E (Ericson) line, dependable and progressive since 1918. Specials to order. Ask on your letterhead for Catalog 53-N.

C&E

electrical safety products

ERICSON MANUFACTURING CO.

1660 HAYDEN AVE., CLEVELAND 12, OHIO

Circle Item No. 88—Reader Service Card

TRADE PUBLICATIONS

These trade publications will keep you up-to-the-minute on new developments in safety equipment and health products. All catalogs are free, and will be sent without obligation. Just circle publication number on the Reader Service Postcard.

Barrel-Lift:

Catalog pages describing Morse Barrel-Lift, Model 80, for raising, transporting, rotating, tilting and draining a fully loaded 55-gallon steel drum. On reverse side of page, the Model 85 Drum-Karrier is described and illustrated. Demonstrates the safest and most dependable method of moving and hoisting 55-gallon drums via monorail and crane. Morse Manufacturing Co., Inc., 727 West Manlius St., East Syracuse, N. Y.

For more details circle No. 401 on enclosed return postal card

Air-Operated Vacuum Cleaner:

This illustrated bulletin outlines details of a light-weight, portable, air-hose operated vacuum cleaner for wet or dry pick-up. Non-electrical, it is suitable for a wide variety of cleaning operations, including hazardous locations. M-M-A, Inc., 53 North Duke St., Lancaster, Penna.

For more details circle No. 402 on enclosed return postal card

Fire Protection:

Advantages of various fire protection systems (fixed-temperature, rate of temperature-rise, and alarm and control systems) are detailed in 36-page Bulletin 66. Gives examples of insurance savings. Automatic Sprinkler Corporation of America, Youngstown, Ohio.

For more details circle No. 403 on enclosed return postal card

Gas Mask with Corrective Lenses:

How a new type of gas mask will benefit persons who must wear corrective glasses is described and illustrated in this 4-page bulletin. Shows the features for holding the lenses built into the equipment. Includes a special prescription form for users requiring this kind of protection. Acme Protection Equipment Co., 1201 Kalamazoo, South Haven, Mich.

For more details circle No. 404 on enclosed return postal card

Fire-Fighting Equipment:

Here's a 40-page illustrated guide to maker's entire line of fire-protection equipment. Lists all types of extinguishers and engines, as well as hose, breathing apparatus, etc. The Fyr-Fyter Co., 221 Crane St., Dayton 1, Ohio.

For more details circle No. 405 on enclosed return postal card

Fork Trucks:

Four-color, 8-page circular describes the construction, operating features, and specifications of three models — 15,000, 20,000, and 30,000 pound capacities — for outdoor handling use. Schematic drawings illustrate components. Clark Equipment Co., Industrial Truck Div., Battle Creek 19, Michigan.

For more details circle No. 406 on enclosed return postal card

Plastic Cover Plate:

Brochure S-6310 contains full information about an aluminized plastic cover plate for welding helmets, and an aluminized cellulose acetate face shield window that protects workers from radiant heat. Plates are 2 x 4¼ size. American Optical Co., Southbridge, Mass.

For more details circle No. 407 on enclosed return postal card

Dermatitis from Epoxies:

This informative 12-page booklet cites the hazards of epoxy dermatitis and lists 36 rules for prevention, grouped under five headings: Education of Workers and Supervisors; Housekeeping Practices; Ventilation; Personal Cleanliness; Use of Protective Creams and Clothing. Milburn Co., 3246 East Woodbridge, Detroit 7, Mich.

For more details circle No. 408 on enclosed return postal card

Daylight Fluorescent Paint:

A bulletin issued by the United States Atomic Energy Commission announces that a daylight fluorescent paint has been developed especially to increase the effectiveness of the radiation warning symbol which is used to mark all radioactive materials and equipment and all areas where the danger of radiation exists. The Day-Glo Radiation Purple meets the exacting requirements of the ASA Safety Color Code for "vivid reddish purple," but is startlingly brighter in daylight than the non-fluorescent purple which has been used up to this time for the radiation warning symbol of three propellor blades grouped around a solid circle. The fluorescent color offers the further advantage that it is immediately distinguishable as Radiation Purple when viewed at distances which make ordinary colors appear white, grey or black. The AEC-approved Day-Glo color is available in an aerosol spray container, as a Brush and Spray Paint and as a silk screen process Speed Dry paint. Further particulars are available from Switzer Brothers, Inc., 4732 St. Clair Ave., Cleveland 3, Ohio.

For more details circle No. 409 on enclosed return postal card

Loud Speakers:

New 12-page illustrated catalog describes University Loudspeakers' complete line of public address and high fidelity loudspeakers . . . for use in public safety and public works fields. Included here are paging and talk-back speakers, heavy duty trumpets and driver units, submergence-proof speakers, portable sound-casting systems and super-power projectors. In addition, there are high fidelity speakers, systems and enclosures and accessories. University Loudspeakers, Inc., 80 S. Kensico Ave., White Plains, N. Y.

For more details circle No. 410 on enclosed return postal card

Difficult Dock Problems and How to Solve Them:

The new bulletin identifies many of the common and uncommon problems encountered in every-day dock loading operations, and points out how many companies have found practical, cost-saving solutions through the application of light-weight magnesium dock boards, mobile loading ramps and portable ramps. Magline, Inc., 1900 Mercer St., Pinconning, Mich.

For more details circle No. 411 on enclosed return postal card

V-Belt Drives:

A comprehensive manual to assist plant engineers and others with power transmission problems. This 108-page book is packed with easy-to-read information on selection and operation of Dodge V-Belt Drives. The catalog pages are arranged in sections covering standard, variable speed and special drives, Taper-Lock Sheaves, Sealed-Life V-Belts, and Taper-Lock Bushings and Hubs. Included are engineering drawings, comprehensive tables of pre-engineered drives, making quick and easy the selection of a complete drive. Other tables give horsepower capacities, belt speeds, center distances, sheave diameters, and other data when special drives are required. Dodge Mfg. Corp., Mishawaka, Ind.

For more details circle No. 412 on enclosed return postal card

Alloy Steel Chain:

Illustrated Bulletin No. 13, 16 pages, presents "How To Do It" information on Steel Chain, Slings, Sling Hooks—from ordering to care, use and inspection. Contains diagrams, charts and tables on standard and special styles of steel chain and attachments, and their sizes, weights and working load limits under many conditions. S. G. Taylor Chain Co., Inc. Box 509, Hammond, Ind.

For more details circle No. 413 on enclosed return postal card

Tool Tester:

Bulletin describes a Pow-R-Safe Tool Tester designed to automatically test the safe working condition of electric hand tools such as drills, screw-drivers, nut-runners, saws, grinders, sanders, soldering irons and extension cords. The tester spots a defective tool or cord before it can cause trouble and eliminates production delays due to faulty electric hand tools and cords. Fendall Co., 4511 N. Lincoln Ave., Chicago 25, Ill.

For more details circle No. 414 on enclosed return postal card

"Tork-Trol" Shear Hub Sprocket:

Engineers and maintenance men who have "sheared a pin" waiting for delivery will want a copy of Bulletin 15 describing Stock "Tork-Trol" Shear-Hub Sprockets. Of sturdy all-steel construction, with bronze-bushed sprocket and drill-rod shear pins in hardened bushings, "Tork-Trol" is available from stock parts. Entire assembly is compact, over-hang is held to a minimum and Tork-Trol is unbreakable. Tork-Trol will provide economical protection against over-loads on any standard roller or conveyor chain drive. Industrial Marketers, 2505 Pinecrest, Ferndale 20, Michigan.

For more details circle No. 415 on enclosed return postal card

Lineman's Safety Equipment:

A complete line of Lineman's Safety Equipment is described and illustrated in this file folder. Includes full description on gloves, inner-liners, leather protector gloves, glove carrying bags, pull-over utility boots, climber guards, overshoes, blankets, lineman sleeves, etc. The Surety Rubber Co., Carrollton, Ohio.

For more details circle No. 416 on enclosed return postal card

Emergency Showers:

Emergency Showers and Decontamination Showers are fully illustrated and described in Bulletin No. 49. Also described is an Emergency Shower and Eyewash Unit designed for use as a package in refinery or other industrial use. Logan Emergency Showers, Inc., Glendale, Calif.

For more details circle No. 417 on enclosed return postal card

Ladders:

The company's line of ladders is covered with illustrations, specifications in this 4-page brochure. Stepladders, platform ladders, heavy-duty industrial steel truss extension ladders, sectional ladders, painter's trestle steel truss ladders and extension planks are listed. The J. R. Clark Co., Spring Park, Minn.

For more details circle No. 418 on enclosed return postal card

Fire Protection Through Research:

A 35-minute 16mm sound film in full color demonstrating the correct systems of fire protection for special hazards. Produced by one of the oldest companies in the fire protection field, "Fire Protection Through Research" is a highly informative and interesting 16mm film. It takes you behind the scenes; explains the basic facts about fire; and then shows you how Grinnell, through research and engineering, has put this vital knowledge to practical application in the control of fire. The film may be obtained for a group showing at no cost or obligation from the Grinnell Company, Inc., 277 West Exchange St., Providence, R. I.

For more details circle No. 419 on enclosed return postal card

Steel-Toe Safety Shoes:

This well-illustrated catalog covers the company's line of Steel-Toe Safety Shoes. Dress shoes with steel-toe-boxes and air-cushioned inner soles with longitudinal and metatarsal support are featured. Comfort is emphasized in all types. Work shoes are discussed and special safety shoes to resist chemicals are featured. Knapp Brothers Shoe Mfg. Corp., 173 Spark St., Brockton, Mass.

For more details circle No. 420 on enclosed return postal card

Visor Goggles:

Goggles which can be worn over spectacles and which have an opaque green visor for all-around protection shown in Bulletin. Goggles have curved, one-piece lenses of tinted, impact resistant plastic, and the visor is ventilated. Jones and Co., 861 Broad St., Providence 7, R. I.

For more details circle No. 421 on enclosed return postal card

Ears and Industry:

This 6-page folder is a discussion of industrial hearing loss and a program for minimizing it. The folder discusses "What is Noise"—"What Sound Levels are Injurious To The Ear"—"Why Audiometric Testing"—"What Is Audiometric Testing"—"How To Set Up A Testing Program"—"Types of Hearing Loss." The Maico Co., Inc., 21 N. Third St., Minneapolis, Minn.

For more details circle No. 422 on enclosed return postal card

Vacuum Hand Pump:

Application of vacuum hand pumps to transferring liquids on many different types of jobs is discussed in this brochure. Tokheim Corp., 1670 Wabash Ave., Fort Wayne, Ind.

For more details circle No. 423 on enclosed return postal card

Industrial Footwear and Clothing:

A colorful folder illustrates and describes United States Raynster Industrial Clothing. Shown are: Coats for engineers, construction bosses, switchmen, overalls, police coats, fire-fighter coats, aprons, heavy-duty footwear, etc. United States Rubber Co., Rockefeller Center, New York 20, New York.

For more details circle No. 424 on enclosed return postal card

Cycoil Oil Bath Aftercleaner:

Bulletin 285 A describes a completely redesigned Cycoil Oil Bath Aftercleaner. The new P-17 Cycoil is designed especially for collecting dust particles that might escape conventional dry centrifugals or viscous impingement filters. Its high collection efficiency makes it ideal for such difficult metal working dust problems as cast iron machining, production metallic grinding, and tool room equipment grinding—operations that can easily cause oxidation damage. American Air Filter Co., Inc., Dept. P-D, 215 Central Ave., Louisville 8, Ky.

For more details circle No. 425 on enclosed return postal card

How to Operate a Lift Truck:

"How To Operate A Lift Truck"—an informative 24-page, 2-color, booklet, is available from the Hyster Company, 2902 N.E. Clackamas St., Portland 8, Oregon. The 2-color cartoon technique used in the booklet is designed for easy reading and is packed with information about the operation of a lift truck, preventive maintenance, safety and basic materials handling. Drawings for setting up an obstacle course are also included.

For more details circle No. 426 on enclosed return postal card

Beryllium Oxide:

"Beryleo" Beryllium Oxide—A refractory oxide of the light metallic element Beryllium—is described in a new 8-page folder just issued by the Beryllium Corp., Reading, Penna. The folder includes discussions on Beryllium Oxide Powder, Beryllium Oxide Crucibles, Crucible Wash, and Beryllium Oxide Shapes. Tables describe the physical and mechanical properties and a typical analysis of Beryllium Oxide.

For more details circle No. 427 on enclosed return postal card

Safety Messages:

Folder gives information on the possibility of reducing accident figures by having safety messages printed on paper cups. U. S. Envelope Co., Springfield, Mass.

For more details circle No. 428 on enclosed return postal card

Hand Cleaners:

Hand lotions containing silicones, lanolin, soothing emolients, and hexachlorophene are described in this bulletin released by Chemical Corp., Inc., 51 Waltham Ave., Springfield, Mass. Also covered in similar literature in "Phlo" Waterless Cleaner for removal of industrial oils.

For more details circle No. 429 on enclosed return postal card

Safety Awards:

Safety plaques, badges and pins in many styles and sizes are presented in a brochure available from Williams Jewelry and Manufacturing Co., 10 South Wabash Ave., Chicago 3, Ill. Each item is pictured along with a complete description including sizes, components and prices.

For more details circle No. 430 on enclosed return postal card

Oxycat Systems for Air-Pollution Control and Waste Heat Recovery:

Oxycat catalytic oxidation systems for industrial air-pollution control and heat recovery are described in a new 8-page bulletin offered by Oxy-Catalyst, Inc., Wayne, Penna. The illustrated literature features four problem-solution case histories of typical Oxycat catalytic installations in the organic finishing and drying, chemical-processing, oil-refining and food-processing industries. Other fields of successful applications are listed. A new Oxycat package unit tailored for simple, fast installation in a large number of standard applications is described.

For more details circle No. 431 on enclosed return postal card

Kuplex Sling Chains:

A colorful and information-packed bulletin, DH-54, Accoloy Kuplex Sling Chains, has been issued by the American Chain Division, American Chain and Cable Co., Inc., York, Penna. The bulletin describes the manufacturer's unique and localized sling chain service program which has been instituted to solve sling chain problems of slow delivery. With quick service from Distributor's stock, there are no more waiting periods for shipments from the factory and no more returning of damaged slings to the factory for repairs. Of interest to production and maintenance personnel, it contains valuable data on choosing proper chain size and style; working load limits at various angles; basic components required to make a sling; and information on assembly and repair of these sling chain assemblies.

For more details circle No. 432 on enclosed return postal card

Basic Safety Controls for Low Pressure Steam Boilers:

A 24-page book published by McDonnell and Miller, Inc., 3500 North Spaulding Ave., Chicago 18, Illinois, covering basic safety controls for all low pressure steam boilers. It is a companion-piece to a previously issued booklet covering safety controls for hot water space heating boilers. A complete Table of Contents directs the reader to all facts about any job he may have under consideration.

For more details circle No. 433
on enclosed return postal card

Hi-Level Communications for Industry:

A 6-page folder that describes and illustrates two-way loud speaking communication equipment for the mining industry. Equipment featured includes speakers, speaker assemblies, amplifiers, microphones, telephone handsets, cables and junction boxes which can be applied to either single or multiple channel operation. A duel channel system consisting of a hi-level paging intercom on one channel and an amplified telephone system on the second channel is also described. Mine Safety Appliances Co., 201 No. Braddock Ave., Pittsburgh 8, Penna.

For more details circle No. 434
on enclosed return postal card

Wire Rope and Sling Handbook:

This spiral-bound handbook G-16 presents a complete listing of wire rope, aircraft cable, slings, swaged-assemblies, and fittings. Along with data on uses, maintenance and other helpful information. The Handbook is completely tab-indexed with detail sectional sub-indexing, and includes dictionary wire rope terms. Macwhyte Co., 2908 - 14th Ave., Kenosha, Wis.

For more details circle No. 435
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Construction Equipment:

An 8-page bulletin, CG-15, describes and illustrates construction equipment. The catalog includes photographs and specifications of Le Roi's complete line of portable air compressors, both reciprocating and rotary; of the Tractair, a combination compressor-tractor, and attachments; of Le Roi Newmatic air tools, including breakers, drills, tampers, and spades; and of CRD one-use drill bits. Le Roi Division, Westinghouse Air Brake Co., Milwaukee, Wis.

For more details circle No. 436
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Safety Cleanout Valve:

A new 4-page technical bulletin describes and illustrates Petrometer Corporation's unique Safety Cleanout Valve for the safe removal of water and sludge from the bottom of storage tanks. The valve eliminates the hazard of fire or explosion where volatile liquids such as gasoline, naphtha and commercial solvents are stored, according to the manufacturer. The construction features and operation and installation details are fully discussed in the bulletin. Diagrammatic sketches illustrate the function of the valve and the path of the water and sludge being removed. Petrometer Corporation, 43-22 Tenth St., Long Island City, N. Y.

For more details circle No. 437
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Climatized Vertical Hollow Shaft Motors:

The Louis Allis Co., 427 E. Stewart St., Milwaukee 1, Wisconsin, has published a new 4-page bulletin, No. 2050, on "climatized vertical hollow shaft motors." These open drip-proof motors, in NEMA frames 364 through 505, are for shallow and deep-well turbine pump applications. The bulletin stresses such motor features as a "climatized" enclosure that provides all-weather security, improved thrust bearing design, metered lubrication and a protected bearing system. Illustrated are installation and maintenance time-reducing features.

For more details circle No. 438
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Rust Prevention Systems:

A 4-page brochure outlining applications and advantages of The Sonneborn Rust Prevention System, is available from L. Sonneborn Sons, Inc., Building Products Division, Dept. EE, 404 Fourth Ave., New York 16, N. Y. It includes information on where, when, and how to use S. R. P. 75 Primer for priming rusted surfaces; and S. R. P. 87 Finish Coat, which adheres to and coats metal surfaces with a protective finish. It tells how these coatings provide greater durability and elasticity in contact with the corrosive elements. Results of adhesion, immersion, fume, electrolytic breakdown accelerated weatherometer, and field performance tests are also pointed out.

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Cable Fireproofing Tape:

A 4-page brochure describes Johns-Manville No. 55 Dry Cable Fireproofing Tape made of asbestos and silicone. According to the manufacturer, the tape will protect cables for years under manhole conditions, and is high in water repellence, low in water absorption, resistant to flame, heat, oil, fungus and mold—non-corrosive to cables — non-sagging, non-drooping — and with ample residual strength after burn-out. Johns-Manville Corp., 22 East 40th St., New York 16, N. Y.

For more details circle No. 440
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Steel Safety Scaffolds:

A 4-page folder describes features and adaptability of Baker Scaffolds for all off-the-floor work. Baker Scaffolds are highly maneuverable, can be easily built up to reach high places and provide a safe, sturdy scaffold which will support several men working at the same height or different levels. Units equipped with 3", 5" or 8" casters, with or without brakes, store flat. Platforms are adjustable every 3", a particularly important feature when working on a staggered or uneven floor surface or on stairways. The Scaffolds are approved and listed under Re-examination Service, Underwriters' Laboratories. Baker-Roos, Inc., Dept. SL-331, 602 W. McCarty St., Indianapolis 6, Ind.

For more details circle No. 441
on enclosed return postal card

Sellstrom Safeguards:

A new colorful catalog published by the Sellstrom Manufacturing Co., Palatine, Illinois, features a complete line of face and eye protection equipment. The 28-page brochure illustrates and describes such products as goggles, glasses, lenses, welding helmets, hand and face shields and respirators.

For more details circle No. 442
on enclosed return postal card

Head and Eye Protector Equipment:

Designed for safetymen's daily use, the 64-page illustrated catalog No. 27 available from Chicago Eye Shield Co., 2727 W. Roscoe St., Chicago 18, Illinois, contains a complete listing of head and eye protection equipment. Descriptions and pictures are included on safety glasses, welder's goggles, helmets, face shields, respirators and masks, to name only a few.

For more details circle No. 443
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Self-Adhering Markers:

Information and catalog plus free working samples which tells how to solve the problem of identification in all industry. Describes uses of their self-adhering industrial tape, including safety signs, tela-pipe signs, numerals, letters and signs, special signs all of which are self-adhering for permanent identification. Westline Products Div., Western Lithograph Co., 600 E. Second St., P. O. Box 2900 Terminal Annex, Los Angeles 54, Calif.

For more details circle No. 444
on enclosed return postal card

Magnetic Liquid Level Gage:

A 2-page Data Unit No. 306 illustrates and describes the operation and gives technical data on the ingenious New Jerguson Magnetic Gage, which makes possible the safe, accurate gaging of explosive or inflammable liquids. Jerguson Gage and Valve Co., 80 Adams St., Burlington, Mass.

For more details circle No. 445
on enclosed return postal card

Autocall Fire Alarm Systems:

A completely revised and comprehensive catalog covering all types of fire warning systems is now available to those concerned with the planning, designing, installation, maintenance or expansion of fire alarm systems. Information covers systems for every type of property from small schools, hospitals and nursing homes, through office buildings, public and private institutions, to large comprehensive industrial installations. The Autocall Co., 57 Tucker Ave., Shelby, Ohio.

For more details circle No. 446
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Dockboards:

Featured in this bulletin is the company's Magnesium Alloy Dockboard. Light enough to be lifted by one man, the Dockboard is strong enough to support 50 men, according to the manufacturer. Hand holes for moving curbs and safety treads for protection against slips, beveled edges to fit floor and chemically resistant coatings are also listed as special qualities of the device. Magnesium Co. of America, Materials Handling Division, East Chicago 4, Indiana.

For more details circle No. 447
on enclosed return postal card

How a Supervisor Can Be Successful in Preventing Accidents:

The purpose of this booklet is to help supervisors reduce the frequency and severity of industrial accidents. It has been compiled by the Safety Engineering Department, Marsh and McLennan, Inc., 231 South La Salle St., Chicago 4, Ill. Presented are more specific suggestions for the supervisor to use in getting the workers' acceptance of his leadership. Emphasis is properly placed in this booklet upon the value of the supervisor's knowledge of human relations.

For more details circle No. 448
on enclosed return postal card

Brock Industrial Preparation:

Booklet discusses industrial dermatitis and describes hand cleaner, Brock PH-7 protective cream, water resistant cream, and work cream for use after exposure to degreasing material. John H. Brock, Inc., 115 Dwight St., Springfield, Mass.

For more details circle No. 449
on enclosed return postal card

Circle Item No. 89—Reader Service Card

Black Beauty

Singer's new lightweight safety clothing and gloves for inert gas arc welding

★ Welder's gloves and mittens

★ Jackets ★ Sleeves (all types)
★ Bib aprons ★ Split-leg aprons

Safety experts agree this beautiful dull black color is the best protection against the greater threat of ultra-violet rays in inert gas arc welding. The leather is about **ONE-HALF** the usual weight, specially tanned to make it soft and pliable. This lack of bulk brings amazing comfort.

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A comprehensive Classified Safety Product Index and a Directory of Safety Equipment Sources appear in the March, 1957 Issue.

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Advertised Products

—feature equipment and services that will help you solve accident problems in your plant. Instead of making a "mental note," make sure you get full information by sending in the card. If no item number appears with an ad, it will be found on the opposite page, next to the arrow. Cover position ads are shown on the cards as: IFC—inside front cover; IBC—inside back cover; BC—back cover.

•

New Safety Equipment

—shown in the special section has been carefully reviewed. Only new products or newsworthy improvements in existing equipment are considered eligible for this section.

•

Trade Publications

—are catalogs, brochures, spec sheets and booklets—a wealth of helpful literature—describing equipment and services that will assist you in comparing before you buy. You can build a valuable safety equipment reference file with these free publications.

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Please send me more information on the items circled below:

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Although the Council does not test or examine the products advertised or mentioned in the editorial features, staff engineers and technicians review all product information in an effort to determine that descriptions and performance claims are accurate. It should not be construed, however, that commercial products are approved or endorsed by the National Safety Council.

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- matching spatula temples
- 6 Curve Super Armorplate clear, medium Calobar, dark Calobar and extra dark Calobar lenses. Also available with clear Plastolite lenses.

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